U. S. NAVY Medicine

July 1973

UNITED STATES NAVY MEDICINE

Vol. 62 July 1973 No. 1

POLICY

U.S. NAVY MEDICINE is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry and allied sciences. The items used are neither intended to be, nor are they, susceptible to use by any officer as a substitute for any item or article, in its original form. The opinions and conclusions expressed in the articles or items included herein are those of the respective authors and do not necessarily represent the views of the Department of the Navy, the Bureau of Medicine and Surgery or any other governmental department or agency thereof.

DISTRIBUTION

U.S. NAVY MEDICINE is distributed to active duty Medical Dept. officers via the Standard Navy Distribution List (SNDL) vice personal addresses. Requests to increase/decrease the number of allotted copies are forwarded via the local command to *U.S. NAVY MEDICINE*, Code 18, Bureau of Medicine and Surgery, Washington, D.C. 20372.

Retired and Reserve officers on inactive duty may subscribe by forwarding request with full name, rank, corps, status, address and zip code.

Notification of address changes should be forwarded together with a recent mailing label.

See inside back cover for additional information.

The issuance of this publication approved in accordance with NAVEXOS P-35.

NAVMED P-5088

CONTENTS

Credits: All pictures are Official U.S. Navy Photographs unless otherwise indicated.

An interesting photo of USS *Bluefish (SSN-675)* (Courtesy of General Dynamics/Electric Boat, Groton, Conn.) graces our front cover. Attention is invited to the feature article on submarine medicine that appears in this issue.

The photo on page 2 reveals VADM D.L. Custis, MC, USN, Surgeon General (center), discussing patient records in the Family Practice Clinic at Pensacola with (from left to right): RADM P.O. Geib, MC, USN, BUMED Code 7; LCDR T.F. Harrington, MC, USNR, family practice physician; RADM O. Gray, Jr., MC, USN, CO, Naval Aerospace and Regional Medical Center, Pensacola; and CDR G.C. Bingham, MC, USN, Director of the clinic. (Courtesy of the PAO, Naval Aerospace and Regional Medical Center, Pensacola, Fla.)

The continued support of Ms. S.B. Hannan, BUMED Code 2133; and the Illustrations and Exhibits, and Photography Divisions of the Media Dept., Naval Medical Training Institute, NNMC, Bethesda, Md.; is gratefully acknowledged.

from the Chief

Reorganization of the Navy's health care delivery system has been instituted with regionalization of essentially all naval medical treatment facilities. The regionalization concept of consolidating all fixed medical facilities in a geographic area, under the authority of a single director, has provided a much improved method of delivering health services and better utilization of resources required for health care. The medical regionalization system affords direction or performance of all management functions by the regional medical center, and the professional direction and supervision of assigned medical facilities by the center command.

Concurrent with the establishment of medical regionalization and planned introduction of dental regionalization, the reorganization of certain health care facilities will be instituted to provide for reassignment of some command and administrative functions from Medical Corps and Dental Corps to Medical Service Corps officers. My policy, therefore, will be to identify and redesignate those administrative billets particularly adaptable for assignment to MSC officers, thereby decreasing the administrative responsibilities and improving utilization of physicians and dentists in clinical assignments. However, there is a sizable number of command and staff positions which must, by their very nature, be filled by dedicated, highly motivated physicians and/or dentists who

are interested in executive medicine and dentistry. To better prepare these officers for these positions, BUMED is in the process of developing a training program for selected Medical and Dental Corps commanders and junior captains interested in executive medicine and dentistry billets in medical centers and hospitals, dental activities, training command, research command, operational staffs, and at BUMED. Currently the Navy has 13 medical department activities with Medical Service Corps officers assigned as commanding officers or officers-in-charge. In accordance with the recent Department of Defense policy on staff and command assignments of health professionals, I have prepared the following proposal for implementation of additional assignments of Medical Service Corps officers in staff and command positions in naval medical and dental facilities.

a. Assign Medical Service Corps officers as commanding officers of the three BUMED-commanded dispensaries which still remain as commands; namely, Naval Dispensary San Francisco, Seattle, and NRMC Washington, D.C.

b. Redesignate "executive officer" billets of naval hospitals as "director of clinical services" responsible for the professional or clinical aspects of the hospital under the CO. *He will succeed to command in the absence of the CO.*

c. Redesignate "administrative officer" billets of naval hospitals as "executive officer" to assume responsibility for all administrative functions as directed by the commanding officer.

d. Assign Medical Service Corps officers as "executive officers" of selected dental centers, clinics, and research activities.

e. Assign qualified allied science officers of the Medical Service Corps as assistant officer-in-charge of preventive medicine units.

f. Recommend assignment of Medical Service Corps officers in some selected staff operational billets.

This plan for staff and command reassignments will be implemented in an evolutionary manner, consistent with the availability of qualified officers, and the size and mission of the facilities.

Your sincere cooperation is essential.

☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

Flag Officer Selection

CLINICIAN ADMIRAL SELECTEES

Robert Leon Baker was born in Oak, Neb., on 7 Feb 1925. After graduating from high school in Mountain Home, Ark., he commenced active duty in June of 1943 as a premedical student in a V-12 unit at Louisiana Polytechnic Institute. Having majored in mathematics, chemistry and biology, he received a Bachelor of Science degree with honors in 1945. At the end of World War II he was working in the laboratory at Nav Hosp Jacksonville, Fla. CAPT Baker earned his M.D. degree in 1949 at the University of Arkansas Medical School, from which he graduated with the highest honors.

Following his medical internship at Tripler General Hospital, Hawaii, Dr. Baker had charge of the Receiving Station Dispensary in Pearl Harbor for one year, and then began a three-year residency in Obstetrics and Gynecology at Nav Hosp Oakland in Aug 1951. He was certified by the American Board of Obstetrics and Gynecology in 1958. CAPT Baker has served as Assistant Chief, Obstetrics and Gynecology in the U.S. Naval Hospitals at Guam, Great Lakes, and Camp Lejeune, N.C. He was the Chief of Obstetrics and Gynecology at Camp Lejeune Nav Hosp from Jul 1959-1965, and became Chief of Obstetrics and Gynecology at Nav Hosp Pensacola in Jul 1965; he served in the same capacity at Nav Hosp Portsmouth, Va., 1969-1972.

CAPT Baker has been the Deputy Director, Executive Officer and Director of Professional Service at the Great Lakes Regional Medical Center since Aug 1972. He holds the office of Professor of Obstetrics and Gynecology at the Medical College of Virginia and has held important positions as a Navy representative in the Armed Forces District of the American College of Obstetrics and Gynecology.

CAPT Baker holds the Meritorious Service Medal, the American Campaign Medal, the World War II Victory Medal and the National Defense Service Medal with one bronze star in lieu of second award.

Married to a former Navy nurse, Rebecca Chandler of Cairo, Ill., CAPT Baker is the proud father of six children. His oldest son, HM2 Jay M. Baker, USN, is a member of the staff at the Naval Medical Research Institute, Bethesda, Md.

CAPT Robert L. Baker, MC, USN

William Matthew Lukash was born on 19 Mar 1931 in Detroit, Mich. He received his B.S. (Psychology) degree from Michigan State University in 1952 and his M.D. degree from the University of Michigan, Ann Arbor, Michigan Medical School in 1956. He subsequently served his internship at Wayne County General Hospital in Eloise, Mich.; and was an Internal Medicine resident at Nav Hosp Great Lakes, 1959-1962. Postgraduate training and education in gastroenterology were obtained at Nav Hosp Philadelphia, and the University of Pennsylvania Graduate School of Medicine. Dr. Lukash is a Fellow of the American College of Physicians and of the American College of Gastroenterologists. He is certified by the American Board of Internal Medicine and was certified in Gastroenterology in 1967.

Dr. Lukash's previous naval assignments include: MSTS-Seattle, Wash., USS *Patrick,* 1957-58; Naval Recruiting-Physical Evaluation, Seattle, Wash., 1958-59; Assistant Chief of Medicine, Nav Hosp Charleston, S.C., 1962-64; Head, Gastroenterology Clinic, and Research Branch of Internal Medicine Service, Nav Hosp Bethesda, 1966-present; Physician to the White House, 1967-present; and Consultant to the Surgeon General of the Navy in Digestive Diseases. CAPT Lukash accompanied President Nixon on historic trips to China and Russia as White House Physician, and was awarded the Legion of Merit for meritorious service to the President in 1969.

In 1970 he was appointed an Assistant Clinical Professor of Medicine at Georgetown University in Washington, D.C. CAPT Lukash is a member of a number of medical societies including the American Gastroenterological Society, American Society for Gastrointestinal Endoscopy, American Society of Cytology, Bockus Alumni International Society of Gastroenterology, Association of Military Surgeons of the U.S., William Beaumont Society of Military Gastroenterologists, and the Pan American Medical Association. He has had innumerable professional articles published, and has twice received William H. Rorer, Inc. Awards for papers in gastroenterology. Notable contributions to committees, medical seminars and symposiums conducted in Washington, D.C., are included in CAPT Lukash's long list of accomplishments.

CAPT William M. Lukash, MC, USN

CAPT Lukash has the Legion of Merit Award, the Vietnam Service Medal with one bronze star, and the National Defense Service Medal.

OTHER ADMIRAL SELECTEES

Robert W. Elliott, Jr., was born in Ashtabula, Ohio. In 1943 he received a Bachelor of Metallurgical Engineering degree from Ohio State University, Columbus, Ohio. He graduated from the Naval Reserve Midshipman School, Columbia University, New York in 1945 and served in the Navy as a line officer until June 1946. In 1950 he earned a D.D.S. degree at Case Western Reserve University, School of Dentistry, Cleveland, Ohio.

Upon graduation from dental school in 1950, CAPT Elliott entered the Navy Dental Corps as an intern and he completed residency training in the specialty of prosthodontics at the Naval Graduate Dental School, Bethesda, Md., in 1961. He is a Diplomate of the American Board of Prosthodontics and has been active as a teacher, recently serving as Head, Prosthodontics Department at the Naval Graduate Dental School. Dr. Elliott was appointed a Clinical Associate Professor of Prosthodontics at Georgetown University, School of Dentistry; and a Professional Lecturer in Prosthodontics at The George Washington University. He is presently assigned to the staff of the Chief of the Dental Corps as Head, Professional Branch.

During his career in the Navy Dental Corps, CAPT Elliott has held positions at the following activities: Norfolk Naval Shipyard, Portsmouth, Va.; Nav Hosp Portsmouth, Va.; Naval Graduate Dental School,

CAPT Robert W. Elliott, Jr., DC, USN

Bethesda, Md.; in USS *Missouri (BB-63);* Naval Administrative Unit, Clarksville, Tenn.; Naval Air Station, Guantanamo Bay, Cuba; Naval Amphibious Base, Little Creek, Va.; in USS *Amphion (AR-13);* Naval Dental Clinic, Norfolk, Va.; and Dental Division, Bureau of Medicine and Surgery.

CAPT Elliott is a member of the American Dental Association, the Carl O. Boucher Prosthodontic Conference, the American College of Prosthodontics, the American Prosthodontic Society, and the Capitol Area Prosthodontic Study Club. He is also a Fellow of the American College of Dentists. Dr. Elliott has published several professional articles and presented numerous clinics in various aspects of prosthodontics.

In addition to the American Campaign Medal and the World War II Victory Medal, CAPT Elliott has the China Service Medal, National Defense Service Medal (Dominican Republic), United Nations Service Medal, and the Korean Presidential Unit Citation.

Paul Kaufman was born in Bay Shore, New York on 24 Mar 1923. He received a B.A. degree in 1943 at New York University, and in 1947 he graduated from The George Washington University, School of Medicine. His internship was completed at the District of Columbia General Hospital, Washington, D.C., in Sep 1950.

Dr. Kaufman entered the U.S. Navy in Sep 1950 and reported for duty at the Naval Gun Factory, Washington, D.C. He served on the staff of Nav Hosp Bethesda, Md., and subsequently was assigned as Medical Officer in the USNS *General W.T. Gordon (T-AP 118).* He was released from active duty in Dec 1953, and went into the private practice of pediatrics in Arlington, Va. CAPT Kaufman returned to active duty with the U.S. Navy in Jul 1959 as Chief of Pediatrics at the Naval Dispensary, Washington, D.C. He attended the Command and Staff Course, Naval War College, Newport, R.I., in Mar 1961; and subsequently served as Deputy Surgeon on the staff of the Commander in Chief, U.S. Pacific Fleet, with additional duty as Deputy Surgeon on the staff of the Commander in Chief, Pacific, from Jul 1962 to Jul 1965; he was awarded the Joint Commendation Medal for meritorious service.

Dr. Kaufman became Deputy Director, Planning Division, Bureau of Medicine and Surgery (BUMED), Navy Department, Washington, D.C., with additional duty as Medical Advisor in Logistics on the staff of the Chief of Naval Operations from Aug 1965 to Jul 1970. He subsequently became Director, Planning Division, BUMED, and was awarded the Navy Commendation Medal for meritorious service in 1970. In Jul 1970

CAPT Paul Kaufman, MC, USN

CAPT Kaufman became Director of Clinical Services, Nav Hosp, National Naval Medical Center, Bethesda, Md., and since Jul 1972 he has been the Director/ Commanding Officer, Naval Regional Medical Center, Jacksonville, Fla., with additional duty as Commanding Officer, Nav Hosp Jacksonville, Fla. He also has performed additional duty as staff officer, Commander Tactical Air, U.S. Atlantic Fleet (COMTACAIR-LANT), since June 1973.

CAPT Kaufman was certified by the American Board of Pediatrics in 1953. He is a Fellow of the American Academy of Pediatrics and the American College of Physicians, and a Diplomate of the National Board of Medical Examiners.

Rear Admiral-select Kaufman has the following medals and awards: Meritorious Service Medal, Joint Service Commendation Medal, Navy Commendation Medal, Combat Action Ribbon, American Campaign Medal, World War II Victory Medal, National Defense Service Medal with one bronze star in lieu of second award, Korean Service Medal, Vietnam Service Medal with one bronze star, Naval Reserve Medal, and the United Nations Service Medal.

CAPT Robert C. Laning, MC, USN

Robert Comegys Laning was born of American parents in Cape Haitian, Haiti, on 20 Sep 1922. (His parents were both born in Japan, the offspring of missionary parents.) CAPT Laning's father was also a physician and a RADM in the U.S. Navy Medical Corps. After graduating from the Woodrow Wilson High School in Portsmouth, Va., CAPT Laning attended the University of Pennsylvania (1941-1943), earned his M.D. degree at Jefferson Medical College in 1948, and served his internship at Jefferson Hospital, Philadelphia, 1948-1950.

Among varied assignments during a fruitful naval career, CAPT Laning has served at Nav Hosps Portsmouth, Va.; Annapolis, Md.; Philadelphia, Pa.; and at the Naval Medical School, NNMC, Bethesda, Md. He has served in USS *Hamul (AD-20),* 1951-1953; and in USS *Intrepid (CVA-11),* 1957-1958. As Chief of Surgery, Dr. Laning was a staff member at Nav Hosps Portsmouth, N.H.; Chelsea, Mass; and San Diego, Calif. From 1961 to 1964 he was assigned to the Astronaut Recovery Team, serving in the primary recovery ship for the first three space flights. After being Executive Officer at Nav Hosp Great Lakes, Ill., from Apr 1971 to Jul 1972, CAPT Laning assumed command of U.S. Nav Hosp Yokosuka, Japan in Jul 1972, with additional duty as Staff Medical Officer, Medical Advisor, Commander Naval Forces, Japan.

Rear Admiral-select Laning is a Diplomate of the National Board of Medical Examiners, and of the American Board of Surgery. He is also a Fellow of the American College of Surgeons, a member of the Association of Military Surgeons of the U.S., and was formerly an Assistant Clinical Professor of Surgery at Boston University School of Medicine.

CAPT Laning holds the following awards and medals: American Campaign Medal, World War II Victory Medal, National Defense Service Medal with one bronze star, Korean Service Medal, Korean Presidential Unit Citation, and the United Nations Service Medal.

Robert Gainsford Wynne Williams, Jr., was born on 10 Jun 1921 in Woodbury, N.J. He received his B.S. degree (Biology) from Rutgers University in 1943, and his M.D. degree from Hahnemann Medical College in 1946. During 1946-1947, he served his internship at Nav Hosp Philadelphia, where he also completed a three-year residency training in Internal Medicine, in 1951.

Military assignments include: USS *Macon (CA-132),* Apr 1947-Sep 1948; Staff, Internal Medicine, U.S. Nav Hosp Yokosuka, Japan, Nov 1951-Jun 1954; Nav Hosp Bethesda, Aug 1954-Aug 1957; Bureau of Medicine and Surgery, Washington, D.C., Division of

CAPT Robert G.W. Williams, Jr., MC, USN

Physical Qualifications and Medical Records, Aug 1957-Jun 1959, and Representative of the Surgeon General on the Physical Review Council; Chief of Medicine and (subsequently) Executive Officer at Nav Hosp Annapolis, Jun 1959-Jun 1964; Chief of Medicine at Nav Hosp Newport, with subsequent additional duty as Executive Officer, from Jul 1964-Jul 1967; Staff Specialist to Deputy Assistant Secretary of Defense (Health and Environment), The Pentagon, Aug 1967-Jul 1970; Commanding Officer, Nav Hosp Beaufort, S.C., Aug 1970-Jul 1972. CAPT Williams is presently the Director/Commanding Officer, Naval Regional Medical Center, Newport, R.I., with additional duty as Commanding Officer, Nav Hosp Newport. He is a Fellow of the American College of Physicians and a Service member of the American Medical Association.

CAPT Williams holds the Navy and Marine Corps Medal, Meritorious Service Medal with one Gold Star in lieu of second award, Joint Service Commendation Medal, American Campaign Medal, World War II Victory Medal, National Defense Service Medal with one Bronze Star, Korean Service Medal, and the United Nations Service Medal.

NESEP DEADLINE 1 SEPT

Applications for 1974 enrollment in the Navy Enlisted Scientific Education Program (NESEP) must reach the Chief of Naval Operations by 1 Sep 1973.

This program consists of four years of uninterrupted education at one of 22 leading universities. While at school, one studies for a baccalaureate degree in engineering, physical science, or mathematics. Upon completion of this education, one receives a commission.

Benefits of a NESEP officer candidate include free tuition, fees and books, plus full pay and allowances for one's enlisted pay grade.

To date, more than 2,260 officers have been commissioned from NESEP. Anyone interested in the program should contact their career counselor or consult OPNAVNOTE 1530 of 9 Apr 1973. When checking this notice, pay particular attention to the age and eyesight requirements which have been changed.—NAVNEWS, No. 0257 (6/1/73).

UTILIZATION OF MILITARY WOMEN

The Navy, Army and Air Force should approximately double the number of military women over fiscal year 1971 end-strength by the end of fiscal year 1977. In addition, the Marine Corps should increase the number of military women by about 40% during the same period. These were the findings of the Central All-Volunteer Force Task Force for the office of the Assistant Secretary of Defense for Manpower and Reserve Affairs.

The task force went on to say that in fiscal year 1973 it will be necessary to attract one out of every 67 qualified single women between the the ages of 18 and 24 years from the full-time labor force in order to meet accession requirements. Because of the increased requirements in fiscal year 1977, it will be necessary to attract one out of every 44.—NAVNEWS, No. 0262 (6/1/73).

ACP Meeting, 1973

By courtesy of CAPT R.H. Easterday, MC, USN,*
Chief of Medical Service, Naval Hospital
Great Lakes, Illinois 60088.

The fifty-fourth annual session of The American College of Physicians was held in Chicago, Ill., 9-13 April 1973 at the Conrad Hilton Hotel. The emphasis of this year's meeting was on the molecular basis of disease, which was addressed by eight distinguished experts at "State of the Art Lectures" delivered at the beginning of each morning and afternoon session. A number of very excellent scientific papers were presented by Naval physicians.

CDR G.T. Strickland, MC, USN, F.A.C.P., delivered a paper entitled, "Wilson's Disease in the United Kingdom and Taiwan. I. General Characteristics of 142 Cases and Prognosis with Penicillamine Therapy." The paper was coauthored by D. Frommer, M.R.C.P.; M-L. Leu, M.D.; R. Pollard, M.S.; S. Sherlock, F.R.C.P., F.A.C.P. (Hon.); and J.N. Cumings, F.R.C.P.; Department of Clinical Investigation, Naval Medical Research Unit No. 2, Taipei, Taiwan; and Department of Medicine, Royal Free Hospital, London, U.K. It was noted that Wilson's Disease has genetic heterogeneity with variations in clinical symptomatology between families, as well as races and countries. Hepatic symptoms were more common in patients with early onset, whereas patients whose symptoms first occurred after 20 years of age usually presented neurologic symptoms. Response was good to penicillamine therapy given for up to 16 years in 88 patients with adequate follow-up. Of 36 symptomatic patients not receiving any penicillamine therapy, 35 are dead; 31 of 35 symptomatic patients

A UNIQUE PAPER ON WILSON'S DISEASE.—CDR G.T. Strickland, MC, USN, F.A.C.P., does the honors.

treated with penicillamine are alive, with 18 asymptomatic. Penicillamine was taken by 22 symptomatic patients for two years or longer; all are alive and only six have residual symptoms.

LCDR Peter T. Kirchner, MC, USN, presented a paper on "The Radioisotopic Differentiation of Acute Tubular Necrosis (ATN) from Rejection in Clinical Renal Transplantation." This paper was coauthored by Kenneth A. McKusick; Leon Malmud; Melville Williams; Henry N. Wagner, Jr., F.A.C.P.; and T.K. Natarajan of Johns Hopkins Medical Institutions, Baltimore, Md. A fall in renal blood flow has been shown to be one of the earliest pathophysiologic signs of renal graft

*CAPT Easterday retired from the Navy in June and his considerate agreement to serve as a splendid reporter for U.S. NAV MED is especially appreciated. Best wishes follow CAPT and Mrs. Easterday who will be sorely missed.

COAUTHOR OF JOHNS HOPKINS' STUDY.—LCDR P.T. Kirchner, MC, USN reported on the radioisotopic differentiation of acute tubular necrosis from rejection in clinical renal transplantation.

rejection. Computer-assisted regional quantitation of serial gamma camera images of the kidney following intravenous injection of 10 mCi ^{99m}Tc-DTPA provides both an accurate measure of renal blood transit time and a quantitative index of total renal blood flow. Radioactivity over the abdominal aorta and transplant was continuously recorded with a gamma camera onto magnetic tape in consecutive three-second intervals for the first minute. The radioisotopic technique correctly identified rejection in 20 studies and ATN in 27 cases. A tracer study was verified in 16 out of 18 biopsied kidneys. This technique was recommended as the best noninvasive technique for ascertaining the cause of transplant anuria.

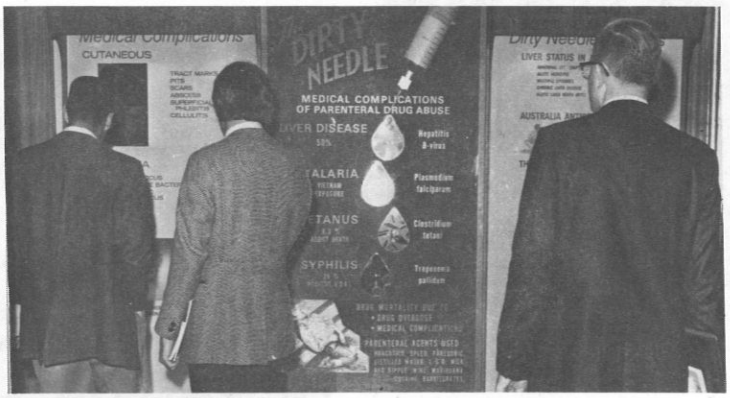
A paper entitled, "Esophageal Dynamics in Hypergastrinemic Pernicious Anemia Patients" was presented by LCDR Joseph B. Hollis, MC, USN (Associate); with LCDR Raymond L. Farrell, MC, USN (ACP Member); and CAPT Donald O. Castell, MC, USN, F.A.C.P., of the Naval Hospital Philadelphia, Pa., as coauthors. Gastrin has been shown to have a specific stimulatory effect on lower esophageal sphincter (LES) pressure, and this hormone is believed to be the main determinant of resting LES pressure. Recently, the predictable elevated LES pressures in hypergastrinemic patients with Zollinger-Ellison syndrome have been shown. Therefore, esophageal function in pernicious anemia (PA) patients having elevated serum gastrin is of particular interest. Studies were made of both LES and esophageal peristalsis in a group of PA patients and age-matched controls. It was found through these studies that the LES pressure in PA patients is abnormal, characterized by both a low resting pressure in spite of hypergastrinemia, and also a failure to respond to cholinergic stimulation. These findings suggested a smooth muscle defect. In contrast, esophageal peristalsis is normal in this disease and indicates that smooth muscle function in the body of the esophagus is unimpaired.

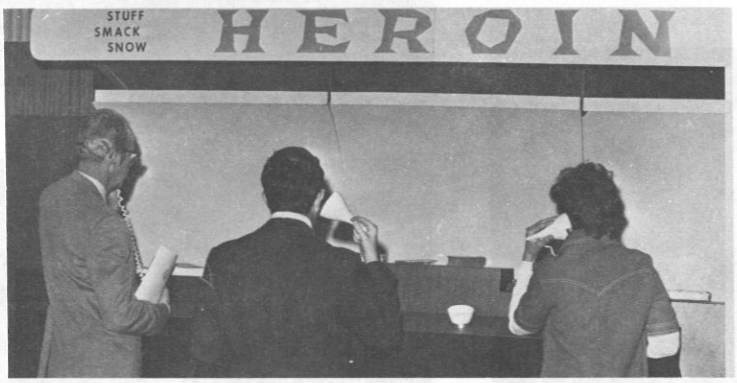
LCDR J.Q. Stauffer, MC, USNR presented a paper entitled, "Treatment of Hyperoxaluria with Cholestyramine in Patients with Regional Enteritis." This paper was coauthored by LCDR M.H. Humphreys, MC, USNR; and CDR G.J. Weir, MC, USN, F.A.C.P.; Department of Medicine, Naval Hospital Great Lakes, Ill. It was noted that patients with regional enteritis and resection of the terminal ileum were known to have increased incidence of urolithiasis, and that some of these patients have elevated rates of urinary oxalate excretion (UoxV). This increased UoxV is thought to be related to the abnormal bile-salt metabolism known to occur in this disease. The data presented showed that the UoxV may be increased only in those patients with regional enteritis who have had intestinal resections of greater than 30 cm in length. Correlation between the bile-salt induced diarrhea, as well as the observations made in patients with the ileostomy, suggested that hyperoxaluria results from delivery of bile salts to the large intestine. Cholestyramine corrects the hyperoxaluria and diarrhea, possibly by binding bile salts and thus preventing deconjugation and the subsequent formation of oxalate precursors and toxic bile acids.

REPRESENTING NAV HOSP PHILADELPHIA.—LCDR J.B. Hollis, MC, USN, coauthor of paper on esophageal dynamics in hypergastrinemic PA patients.

EXPERTS ON CHOLESTYRAMINE TREATMENT OF HYPEROXALURIA.—And they presented a paper to prove it. Standing from left to right, the authors of a fine paper from the Dept. of Medicine at Great Lakes Nav Hosp are: LCDR M.H. Humphreys, MC, USNR; CDR G.J. Weir, MC, USN; and LCDR J.Q. Stauffer, MC, USNR.

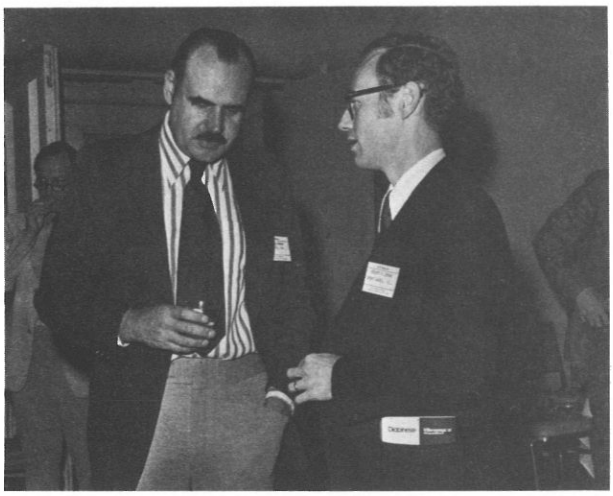
U.S. NAVY EXHIBITS



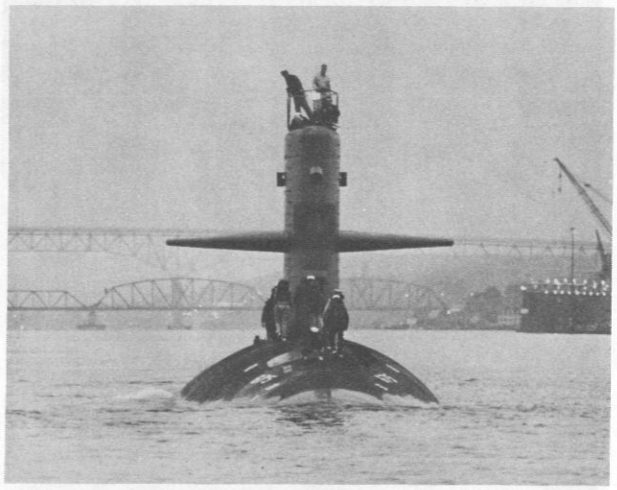


Several excellent scientific exhibits were offered by the Navy Medical Department and one entitled, "The Medical Complications of Parenteral Drug Abuse" was monitored by CDR Raymond Johnson, MC, USN of the Naval Medical Center, Naval Hospital Bethesda, Md. An exhibit entitled "Heroin," sponsored by the Bureau of Medicine and Surgery, Washington, D.C., created much interest. Another popular exhibit entitled "The VIP Stain: A Dynamic Approach to Office Identification of Common Vaginal Pathogens," was sponsored and presented by the OB-GYN Department, Naval Hospital Boston, Chelsea, Mass., and the Bureau of Medicine and Surgery.

One of the pleasurable social events of the week was a no-host cocktail party for various Navy physicians and their guests, in the Upper Summit Suite of the Conrad Hilton Hotel. The event was arranged by this reporter and the staff of the Naval Hospital Great Lakes. It was a well-attended party and offered those active, retired, or past Navy internists and their guests a wonderful opportunity to renew past acquaintances and meet new friends. (See our candid photos.)



Submarine and Diving Medicine Research Program



USS BLUEFISH (SSN-675).—Photo by courtesy of General Dynamics/Electric Boat, Groton, Conn.

By LT Owen Q. Hanley, Jr., MC, USNR*
Assistant for Submarine and Diving Medicine,
Research Division, Bureau of Medicine and Surgery,
Washington, D.C. 20372.

INTRODUCTION

The purpose of the Bureau of Medicine and Surgery's Diving Research program is to provide the biomedical knowledge necessary for the safe support of the Navy's Deep Submergence operations. The program constitutes this nation's largest biomedical effort in support of man in the sea.

An interdisciplinary approach is needed to understand and ameliorate the physiologic and allied submarine medical problems encountered in the cold, high-pressure environment; contributions from biophysics, biochemistry, behavioral sciences, bioengineering, pharmacology, and physiology are required. There is an essential need for high-caliber biomedical scientists with the aptitude, inclination, specialized training, and experience to resolve the many and complex problems presented.

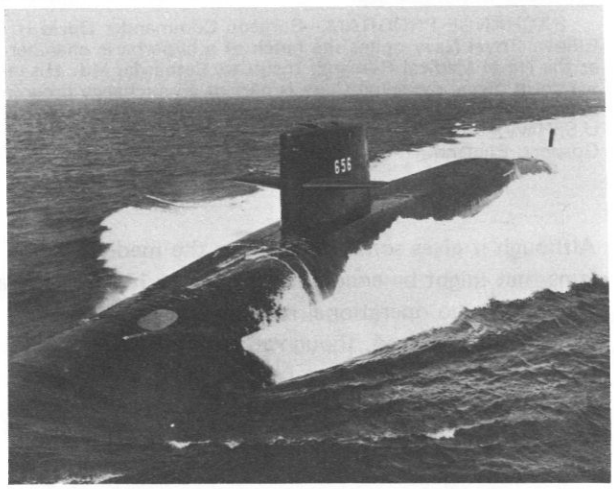
The Navy's undersea biomedical investment is about $5 million per year. Some 100 ongoing underwater R & D projects comprise the BUMED portion of this program. Work is spread throughout the Navy's biomedical laboratories but is concentrated at the Naval Submarine Medical Research Laboratory in Groton, Conn., and the Naval Medical Research Institute, National Naval Medical Center, Bethesda, Md. Research effort is also supported at some 20 universities and research institutes, principally the University of Pennsylvania, Duke, State University of New York (Buffalo), and the Virginia Mason Research Center.

BUMED's exploratory development and advanced development efforts are closely coordinated with the basic research program of the Office of Naval Research (ONR). All BUMED contracts are processed through ONR's project office. Liaison is also maintained with other government agencies such as the National Oceanographic and Atmospheric Administration, and also the National Research Council, to prevent duplication of effort or disruptive competition for the limited biomedical expertise that is available.

*Dr. Hanley was released to inactive duty on 1 May 1973. The opinions or assertions expressed in the above article are those of the author and do not necessarily reflect the views of the Navy Department or the naval service at large.

In addition, an exchange program with the Royal Navy has been in operation for several years. A U.S. Navy medical officer is assigned to work with the Royal Navy at the Institute of Naval Medicine, Gosport, England. A counterpart British medical officer is assigned to work at the Naval Medical Research Institute in Bethesda. Both officers are actively involved in hyperbaric research.

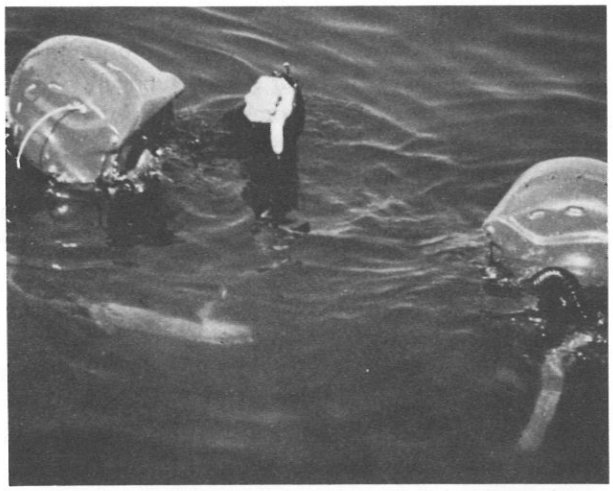
In order to stimulate and coordinate investigative work in underwater medicine, the Submarine and Diving Medicine Section of the BUMED Research Division is a frequent sponsor of symposiums, conferences, and international exchange meetings.



POLARIS SUBMARINE.—BUMED's Submarine and Diving Medicine Research Program is designed to enhance the Navy's underwater operational capability and effectiveness. Pictured above is the Polaris submarine *George Washington Carver.*

DEEP SUBMERGENCE BIOMEDICAL DEVELOPMENT PROJECT

Long lead times are the rule in biomedical research. Before undertaking a project, it is necessary to be aware of the medical hazards involved and to know if they can be averted. Such information is essential in determining the feasibility of the project and identifying the bioengineering hurdles to be overcome. Several years ago, it was recognized that the long-standing U.S. Navy program in ocean-engineering technology was in danger of overtaking the existing level of understanding of human underwater physiology. To balance the ocean program and widen the narrowing gap between biomedical and engineering know-how, the Deep Submergence Biomedical Development Project was established in 1968 as a component of the Navy's Ocean Engineering Technology Development Program. Applied bioengineering research

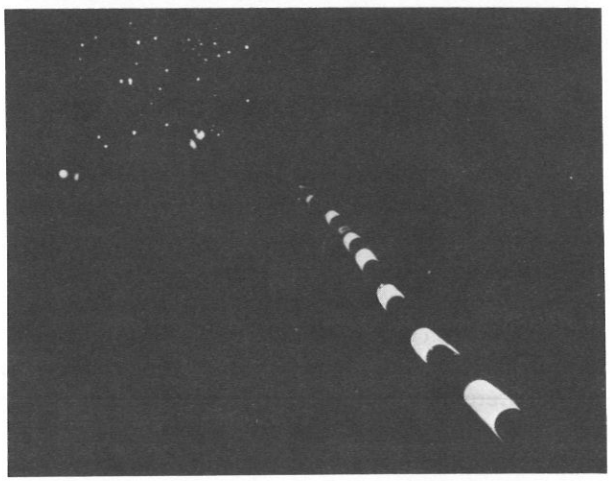


THUMBS DOWN.—U.S. Navy diver gives sign for descending during an at-sea operation.

pertaining to physiology in operational environments is funded at from $2.5 to $3.5 million per year, of which 60% is spent in Navy laboratories and 40% in university or industrial research facilities.

EXPLORATORY DEVELOPMENT

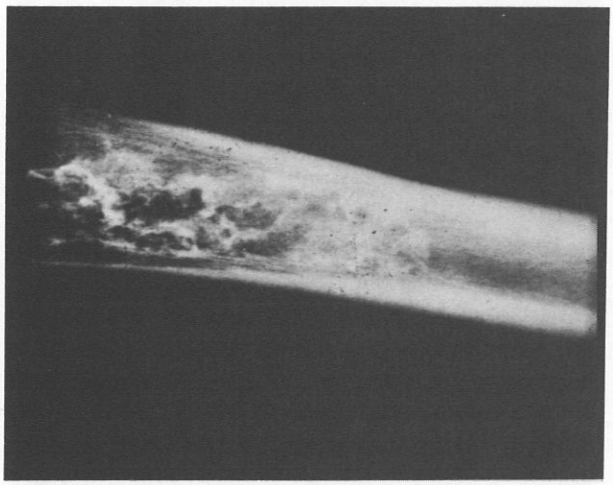
Complementing the Deep Submergence Biomedical Project is a $1.4 million exploratory-development program, divided for administrative purposes into: diving medicine, submarine medicine, and diving safety task areas. The biomedical research product that is disseminated to the fleet is software-medical understanding, decompression and treatment tables, improved operational procedures, medical doctrine, and diving-safety



VIEW AT A DEPTH OF 1,000 FT.—This photo was taken from the Personnel Transfer Capsule of the U.S. Navy Deep Diving System Mark II by divers of Submarine Development Group One during their historic dive.

limits. The information is applied as a base to improve techniques, to establish new operational safety limits, or to design criteria for safer equipment. The few devices or pieces of equipment that are developed provide a means to software ends.

The research program addresses both 1-atmosphere and ambient pressure systems for diving and submarine operations, free swimmers, and diverse operations, from shallow waters to as deep as humans are capable of descending. However, most of the present work relates to the cold, dark, high-pressure environment of swimmers and divers, since most of the biomedical problems of 1-atmosphere submersibles are not recognized as critical to military operations. The biomedical research program is designed to meet Department of Defense requirements.



ASEPTIC BONE NECROSIS.—This problem complicates many illnesses and injuries. It is now being recognized in divers and caisson workers. In this X-ray photo a bone lesion is clearly evident.

GOAL: EFFECTIVE PERFORMANCE

The Navy is interested in improving underwater safety and performance under day-to-day operational conditions. Nevertheless, a significant portion of the research effort is spent probing for man's physiologic limits for two interrelated reasons. First, a study of the failure which ultimately occurs when man is pushed beyond his capabilities gives insight into the mechanisms which govern human physiology in the regions in which man can safely operate. Second, the lag from prerequisite research to operational capability can be a time-consuming factor.

This deep work, therefore, is undertaken to improve the safety and effectiveness of shallow operations.

EXCHANGE PROGRAM.—Surgeon Commander David H. Elliott, Royal Navy opens the hatch of a hyperbaric chamber at the Naval Medical Research Institute, Bethesda, Md. His research in diving medicine there is part of an exchange program between the U.S. Navy and the Royal Navy. A counterpart U.S. Navy officer is assigned to the Institute of Naval Medicine, Gosport, England.

Although it gives some insight into the medical problems that might be encountered beyond 1000 ft, there is currently no operational requirement to work at such depths. Indeed, though the Navy has the expertise to go below 1000 ft, a host of medical and engineering problems must be tackled before this region can be safely exploited.

NEEDED: BIOMEDICAL SOLUTIONS

The traditional problems of decompression sickness, oxygen toxicity, and inert gas narcosis still defy complete understanding. But by empiric techniques, it has been possible to avoid or lessen their effects.

Both from theoretical considerations and direct observations made during deeper research dives, submarine and diving medicine investigators have uncovered new critical phenomena, such as:

Respiratory heat loss. As the diver descends, the gas he breathes becomes increasingly dense. Below 600 ft, the amount of heat this dense gas can carry away from the body becomes very large; this not only produces a dangerous heat drain on the diver but also causes a local hypersecretory response in the lungs. Needless to say, the frothy sputum that results could cause fatal pulmonary obstruction. Medical Department bio-engineers have now promulgated the minimal allowable inspired-gas temperature for each depth to avert this hazard.

High pressure nervous syndrome. This is characterized by a succession of neurological symptoms of

increasing severity — tremors and increased theta rhythms on electroencephalogram studies — culminating in convulsions. Over the past three years, research has shown this syndrome to be related to both the rate of compression and absolute depth. Although originally thought to be a serious obstacle to man's diving to great depths, recent developments suggest that alteration in compression techniques, altered breathing-gas mixtures, and pharmacological aids may considerably ameliorate this problem and safely extend man's diving capability.

Eighth nerve damage. With increasing pressure, vestibular problems of sudden onset which greatly impair the diver's orientation have been discovered by several investigators with some dive profiles. Although this has not been observed in saturation diving in accordance with USN procedures, several projects are now underway to better understand this problem.

Other major problem areas. Currently under study are: aseptic bone necrosis in divers (approximately 4% of U.S. Navy saturation divers, and up to 50% in some U.S. and Japanese civilian diving populations); oxygen toxicity; disruption in diver communication, produced by the dense helium gas that must be breathed below 300 ft; and the problem of inert gas narcosis.

The bulk of submarine and diving medicine effort is being expended in the areas described above as well as in the development of improved decompression tables. Improved safety monitoring of the diver and other areas, as diverse as improving the safety and depth capability of submarine escape, publication of data on non-fatal underwater blast injury, and a longitudinal health study of divers, are also receiving attention.

A detector of bubbles formed in the blood during decompression has been developed, tested, and made available to Navy laboratories and operational diving units. Also, decompression tables for the new saturation Deep Diving Systems Mark I and Mark II have been developed, refined, and tested.

The concept of saturation diving developed by U.S. Navy medical officers has allowed Navy divers to be placed in the open sea at 1,010 ft, and has allowed Royal Navy research-chamber divers to reach 1,500 ft; a French commercial research team has even set a world hyperbaric chamber record to 2,001 ft. If the U.S. Navy is to exploit this exponential increase in potential diving depths and total underwater-mission time, it will need to solve the medical problems imposed and other difficulties that will surely be encountered, so that safe and effective manned underwater operations can be conducted.

MAJOR U.S. FACILITIES CAPABLE OF CONDUCTING DEEP HYPERBARIC RESEARCH

FACILITY	*DEPTH* (in feet)
Naval Submarine Medical Research Laboratory, Groton, Conn.	300
Naval Medical Research Institute Bethesda, Maryland	1,000*
Duke University, Durham, North Carolina	1,000
**Navy Experimental Diving Unit Washington, D.C.	1,000
Westinghouse, Annapolis, Maryland	1,500
University of Pennsylvania Philadelphia, Pa.	1,800
Taylor Diving and Salvage New Orleans, La.	2,000
Naval Coastal Systems Laboratory, Panama City, Fla.	2,250 (1973)
State University of New York Buffalo, New York	5,600 (1973)

*Military construction has been approved for construction of chambers with a capability of 3,000-ft depth.

**Although it has been rumored that this unit, at least in part, will be relocated to the Naval Coastal Systems Laboratory in Panama City, Fla., no official determination has been made to date which would authorize the relocation.

NENEP - 51 CORPSMEN SELECTED

Hospital corpsmen selected to participate in the Navy Enlisted Nursing Education Program (NENEP) number 51. These selectees, including four women, were picked from 164 qualified petty officers who applied for the program.

Originated in 1957, NENEP is a college program for petty officers on active duty in the Hospital Corps that leads to appointment in commissioned grade and active duty as a Nurse Corps officer in the Naval Reserve.—NAVNEWS No. 0228 (5/4/73).

Norfolk Meeting of NATO Medical Officers

By CDR Robert L. Koon, MSC, USN;
Medical Plans Officer of the SACLANT Headquarters Staff,
Headquarters of the Supreme Allied Commander Atlantic,
Norfolk, Virginia 23511.

The Sixth Biannual Allied Command Atlantic Medical Conference was held 6-8 Dec 1972 at the Headquarters of the Supreme Allied Commander Atlantic, Norfolk, Va.

BACKGROUND

The Allied Command Atlantic (ACLANT) is one of the three major military commands established under the North Atlantic Treaty Organization (NATO), the other two being the Allied Command Europe and the Allied Command Channel.

SACLANT.

The Headquarters of the Supreme Allied Commander Atlantic (SACLANT), activated in April 1952 at Norfolk, Va., is the first international military headquarters to be permanently established on U.S. soil in peacetime. It is manned by approximately 150 Navy, Air Force, Army, and Marine Corps officers, representing eight of the 15 NATO nations who have an active interest in the ACLANT area of responsibility and 190 enlisted personnel provided by the U.S. The eight nations are: Canada, Denmark, Italy, The Netherlands, Norway, Portugal, the United Kingdom and the U.S.

NATO's aim is to safeguard the freedom and common heritage of its 15 member nations, founded on the principles of democracy, individual liberty and the rule of law. Basically, NATO is a coalition of oceanic powers, all of whom, throughout history, have recognized that their very existence is imperiled without unrestricted use of the seas. All depend on maritime trade for economic support in peacetime, and for survival in war. The Allied Command Atlantic was established by NATO to protect and maintain the freedom of the North Atlantic. Admiral Ralph W. Cousins, USN assumed command of the Atlantic Unified Command, the U.S. Atlantic Fleet and the NATO Allied Command, Atlantic on 31 Oct 1972.

Certain nations of the NATO Alliance have earmarked Naval and Maritime Air forces for duty under SACLANT in wartime, and also for exercises in peacetime. SACLANT employs this internationally combined force under four major subordinate commanders: the Commander in Chief, Eastern Atlantic (CINCEASTLANT), with headquarters in Northwood, England; the Commander in Chief, Western Atlantic (CINCWESTLANT), with headquarters in Norfolk, Va.; the Commander, Striking Fleet Atlantic (COMSTRIKFLTLANT), a mobile command at sea; and the Commander, Submarines, Allied Command Atlantic (COMSUBACLANT), with headquarters in Norfolk, Va.

STANAVFORLANT.

Standing Naval Force Atlantic (STANAVFORLANT) — the first multinational naval squadron to be formed

RADM Richard D. Nauman, MC, USN, Chairman of the ACLANT Medical Conference.

on a permanent basis in peacetime — was activated at Portland, England on 13 Jan 1968. Formation of STANAVFORLANT, of destroyer-type ships from the countries of the NATO Alliance, was approved at the NATO Ministerial Meeting in Brussels in mid-December 1967. The primary purposes of the Force are to develop a cadre of ships experienced in combined operations and provide a symbol of NATO's political and military solidarity. STANAVFORLANT developed from its predecessor, the NATO Match Maker Squadron, a force which operated together temporarily for periods of six to seven months between 1965 and 1967.

The Force usually is composed of four to eight destroyers, frigates or submarines, but more ships of various types may be added, making the Force flexible in size and numbers. The first Commander of STANAVFORLANT was CAPT Geoffrey C. Mitchell, Royal Navy. Command of the force, the staff, and the ships are provided by the NATO nations of the Atlantic area, on a rotational basis.

STRIKING FLEET ATLANTIC.

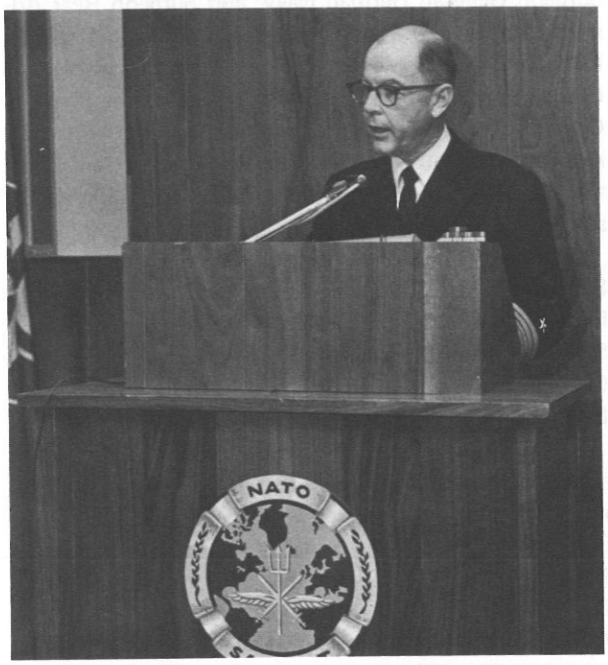
Since Nov 1952, the role of Striking Fleet Atlantic in the North Atlantic Treaty Organization (NATO) has been increasingly important. In 1952, eight months prior to the end of the Korean conflict, NATO member nations formed an important naval striking force to be supported by the maritime nations of NATO. It was named Striking Fleet Atlantic, and charged with a mission of insuring the use of the Atlantic sea lanes and retaining control of the Atlantic Ocean for the U.S., her allies and the free world.

Commander of NATO's Striking Fleet is a U.S. Navy Admiral who also commands the U.S. Second Fleet in his national role. Second Fleet warships make up an important segment of Striking Fleet. Basically, Striking Fleet Atlantic is made up of two carrier striking groups: one commanded by a U.S. Naval officer and composed of U.S. ships; the other by a British Naval officer and composed of British and Netherlands ships. Both Commanders are of flag rank.

This international naval force conducted its first exercise the year it was formed. Since then, there have been other major NATO military exercises involving Striking Fleet Atlantic and numerous smaller exercises of task groups within its organization. Periodically, units of the Second Fleet visit European ports in a NATO capacity. In each port, U.S. Naval officers make official calls on local NATO commanders. Each port visit is recognized as a means of strengthening our NATO Alliance.

ACLANT MEDICAL CONFERENCE

Among those attending the Conference were Surgeon Rear Admiral R. Kooper, Medical Director General of



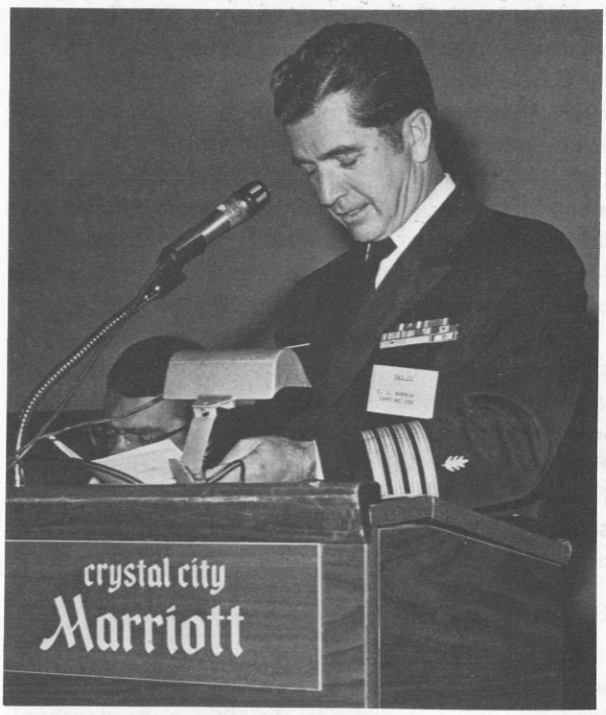
VADM J.J. Lebourgeois, USN, Chief of Staff, Supreme Allied Command Atlantic welcomes delegates.

Delegates for the 1972 Allied Command Atlantic Medical Conference.

the Royal Netherlands Navy; Rear Admiral H. Robbers, Surgeon General, German Navy; and Surgeon Rear Admiral Anthony O'Connor, Medical Officer in Charge, Institute of Naval Medicine, Royal Navy. Brigadier General H.B. Webb, MC, USAF represented the Surgeon General of the U.S. Air Force; Rear Admiral Willard P. Arentzen, MC, USN represented the Surgeon General of the U.S. Navy; and Colonel R.H. Ross, MC, USA represented the Surgeon General of the U.S. Army.

Vice Admiral J.J. Lebourgeois, USN, Chief of Staff, Supreme Allied Command Atlantic, gave the welcoming address for Admiral Ralph W. Cousins, USN, The Supreme Allied Commander Atlantic and Commander in Chief Atlantic and U.S. Atlantic Fleet, who was in Europe during the Conference.

The first day of the Conference was devoted to a consideration of operations, before getting into the specific medical problems associated with them. Alcohol abuse programs were considered and a visit to an Alcoholic Rehabilitation Center was made. Rear Admiral Richard D. Nauman, MC, USN, Medical Advisor to The Supreme Allied Commander Atlantic, was chairman for the Conference and hosted a reception for the delegates and their wives on the first evening in the SACLANT Staff Mess.



CAPT (now RADM) E.J. Rupnik, MC, USN talks on "Paramedical Training Programs."

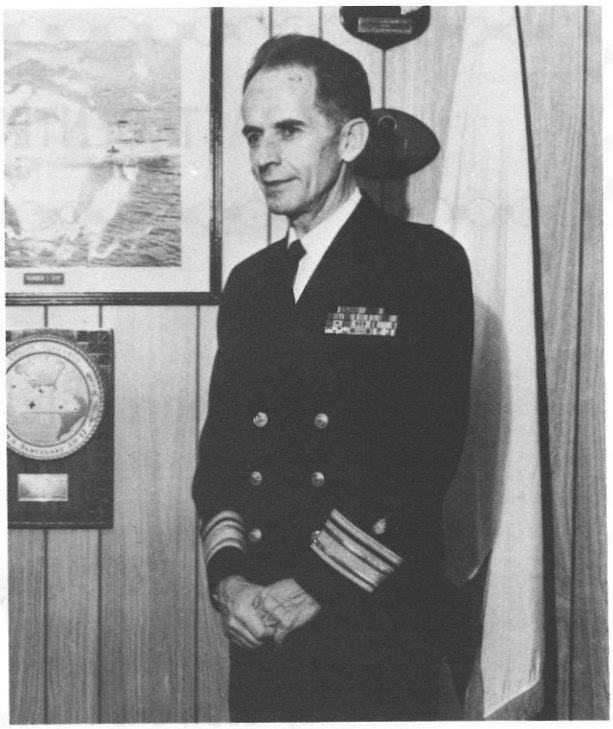
The use of automatic data processing in casualty estimations was presented by Major J.B. Carter, MSC, USA, Office of the Army Surgeon General, and Major T.R. Milske, MSC, USA, Staff, Commander in Chief Atlantic. Following the briefing a demonstration was given in the War Room of the Operational Control Center of the Commander in Chief Atlantic. A briefing and film on the "MUST" Unit followed.

Commander C.O. Wimberly, MSC, USN, Administrative Officer to Atlantic Fleet Surgeon RADM Richard D. Nauman briefed the delegates on the Atlantic Fleet Drug Abuse program and conducted a tour of the Counseling and Rehabilitation Effort (CARE) Center at the Naval Station, Norfolk, Va.

Captain (now RADM) E.J. Rupnik, MC, USN gave a presentation on paramedical training in the U.S. Navy which was especially well received.

The Conference was climaxed with a helicopter tour of the Tidewater Area and a brief by RADM Willard P. Arentzen, MC, USN, on the Navy Regional Medical Center concept, followed by a guided tour of the Naval Hospital, Portsmouth, Va.

The conferees indicated great interest in the agenda and the Conference proved most useful to all concerned.



RADM Willard P. Arentzen, MC, USN presents the Navy Regional Medical Center concept.

NAVY DIVERS COMPLETE EXPERIMENT

Six Navy divers recently completed an unprecedented diving experiment when they successfully worked and lived at a simulated depth of 1600 feet for a period of seven days.

The simulated dive which took a total of 32 days to complete, was made in a hyperbaric diving chamber located in Belle Chasse, La. The team took six days to be pressurized "down" to the 1600 foot level, conducted tests and experiments for seven days, and then underwent another 19 days of decompression before the dive was complete. Throughout the experiment, they lived in a small "igloo" above a "wet pot" filled with seawater, where underwater tests were conducted.

Although the dive was primarily a medical experiment, the experience gained is expected to aid future Navy deep-sea salvage, submarine rescue or weapons recovery operations.

The six Navymen were awarded the Navy Commendation Medal for their effort by RADM Walter N. Dietzen, the Navy's Deep Submergence Program Coordinator.—CHINFO Newsgram (23-73).

THE GASTROENTEROLOGISTS' CORNER

Photographic Documentation of Pathologic Findings

By LCDR Otto T. Nebel, MC, USNR,
Gastroenterology Branch, Medical Service;
HM3 J. Fowler, USN, and HM1 C. Wolff, USN,
The Medical Photography Laboratory;
Naval Hospital, San Diego, California 92134.

INTRODUCTION

Photographic documentation of pathologic findings has become a routine practice in many areas of medicine. This is especially true of endoscopy where photographic attachments allow fast, simple, and inexpensive color slides to be taken. Color slides are excellent for future reference and provide a convenient form for group presentation. However, because of the small size (5-10 mm) of the image obtained through most endoscopes, the slide is not ideal for chart or consultation documentation. Recent work with Polaroid macrophotography of color slides has produced a fast, inexpensive method of producing color, or black-and-white prints, from color transparencies.[1] The purpose of this paper is to describe the method used to produce these prints, using equipment that is generally available in most naval hospitals.

The opinions or assertions contained herein are those of the authors and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

METHOD

The production of Polaroid prints from color transparencies requires a light source, slide holder, macrolens, shutter, bellows, and Polaroid back. We prefer a small electronic flash for light, as the color temperature of the light produced (6,000° K) is balanced for Polaroid color film. A slide holder is easily made with fiberboard, and two spring clips to hold the slide in place. Any macrolens that will produce 5-10X magnification may be used. We have obtained satisfactory results using the 35 mm Polaroid macrolens as well as the Spriatone 35 mm macrotar. Electronic flash synchronization with the shutter is required and we have used a Polaroid shutter. Selection of a bellows apparatus will depend on the equipment available. The Polaroid MP3 is available in most Naval photographic laboratories and may be easily converted for this technique (See Figure 1). However, any view or press camera with bellows greater than 12 in. may be used.[1] The Polaroid back will depend on the bellows. The Polaroid Model-100 back is generally preferred, as the

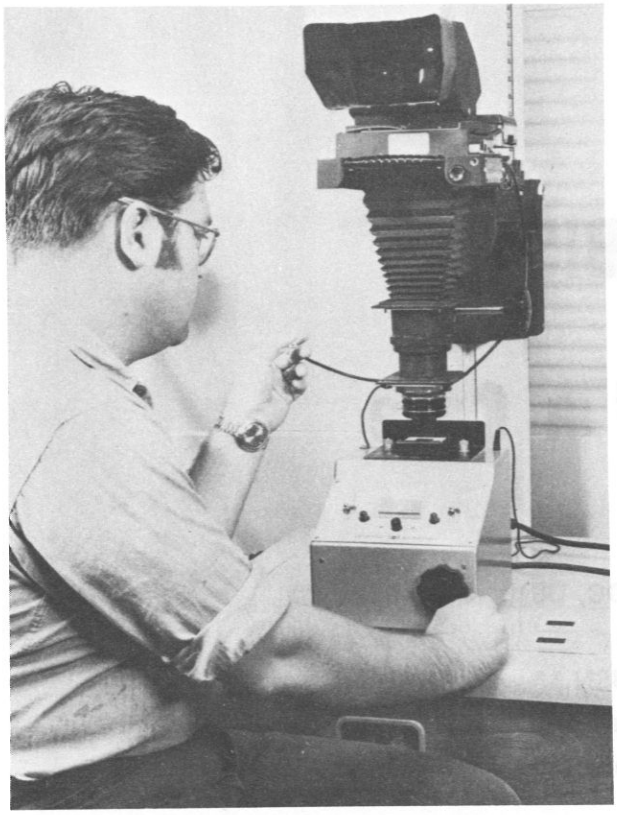


Figure 1.—Picture of Polaroid MP3 illustrates (from top to bottom): Polaroid back, bellows, shutter, macrolens, slide holder, and light source.

4 x 5 back requires more expensive film. A unit assembled from components described above is shown in Figure 1.

RESULTS

Figure 2 represents the product of a color transparency using the apparatus shown in Figure 1. The size of the color print produced depends on the Polaroid back (3¼ x 4¼), as well as the type of color transparency which is being copied. For fiberoptic photographs, a 2-3 in. print is generally preferred, as prints greater than 3 in. may show distracting fiberoptic bundle enlargement.

DISCUSSION

Polaroid prints of color transparencies provide a convenient method for producing color, or black-and-white documentation of endoscopic findings. The advantage of this method over black-and-white or color-negative film include economy, convenience, speed, and reliability.

Black-and-white film may be used in most endoscopes to produce prints. The technique is the same as with routine black-and-white printing, and is associated with the problems of contact proofing and print selection. In addition there are no slides for group presentation,

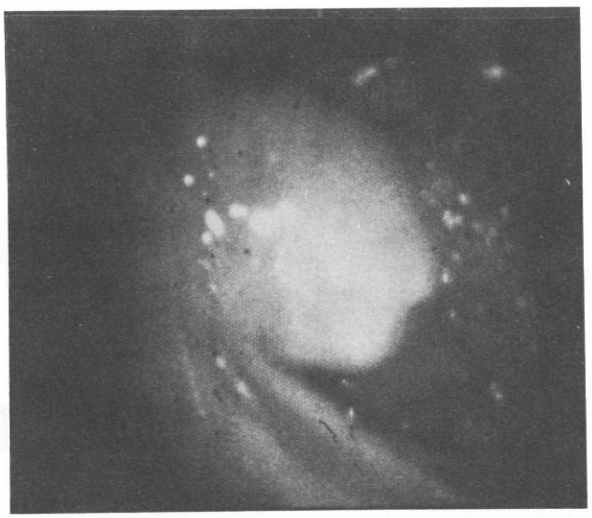


Figure 2.—Polaroid print of an ampulla-of-Vater carcinoma, acquired using apparatus shown in Figure 1.

and the lack of color may impose a significant problem in depicting some lesions, such as gastritis or esophagitis.

Color-negative film may be used to produce color prints but this technique generates prints that tend to be expensive ($3.00-$5.00 per patient), small (1 in. with 3X enlargement), and slow (one to two weeks of processing time). In addition, color slides are difficult to produce from color-negative film.[2]

In contrast to the preceding methods, Polaroid prints are easy and convenient to make once the apparatus is assembled. The slides are not harmed in the process. Only those slides that are technically satisfactory are used, thereby eliminating all unwanted or unusable prints. Cost per print may be reduced to $0.25 by making two prints on each Polaroid film, and if color prints are not needed, considerable savings may be realized by utilizing Polaroid black-and-white film. Finally, since color transparency film is usually processed locally or in the hospital, and since color prints may be made as soon as the slides are available, the production of Polaroid prints is frequently the fastest method for providing prints of endoscopic findings.

In our experience photographic documentation of pathologic findings is a valuable addition to the consultation report. The method described here has proved satisfactory, and is available in most naval hospitals.

REFERENCES

1. Nebel O and Smith D: Endoscopic photography: Polaroid versus color negative film. Gastroint Endosc 19:89, 1972.

2. Overholt BF: Endoscopic photographic documentation: A new method. Gastroint Endosc 18:183, 1972.

CHERUBISM:

Report of a Case

By CAPT Elgene G. Mainous, DC, USN*
and
CDR David J. Smith, DC, USN.**
(Illustrations by HM2 James Spencer, USN;
Medical Photographer, Naval Hospital Long Beach, Calif.)

INTRODUCTION

The presence of asymptomatic, multiloculated expansile lesions involving the mandible present an interesting problem in differential diagnosis. The need for an accurate diagnosis is necessary if mutilating surgery is to be avoided. The utilization of the Panorex radiographic examination in screening of naval recruits has proven invaluable as an aid in the diagnosis of asymptomatic lesions of the jaws and associated structures.

REPORT OF A CASE

An 18-year-old male seaman recruit was referred to the Dental Service at the Naval Hospital, San Diego, Calif., for evaluation of a multilocular, radiolucent lesion involving the entire mandible. The lesion had been discovered on routine Panorex radiographic examination during recruit training (Figure 1). The patient was unaware of his mandibular lesion which was asymptomatic.

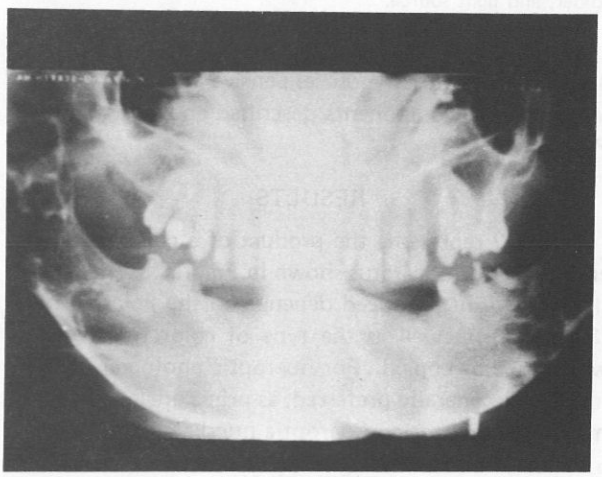


Figure 1.—Panorex radiograph demonstrating multilocular radiolucent lesion of mandible.

Past medical history revealed that the patient had had multiple teeth extracted in a rural Midwestern community at the age of 13 years, because of caries and a condition described as "cysts."

Physical examination was within normal limits except for the intra-oral examination which revealed multiple missing teeth. The remaining teeth were in a poor state of repair and the alveolar ridges exhibited

*Chief of Dental Service and Head of Oral Surgery, Naval Hospital, 7500 East Carson St., Long Beach, California 90801.
**Oral Surgeon, Dental Service, Naval Hospital, Philadelphia, Pennsylvania 19145.

The opinions or assertions contained herein are those of the authors and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

multiple elevations and depressions. The facies was elongated.

Radiographic examination revealed an expansile multiloculated radiolucency involving the entire mandible.

Laboratory studies included: a complete blood count; urinalysis; blood chloride, potasium, calcium, phosphorus, alkaline phosphatase, acid phosphatase, total protein, and albumin, which were within normal limits; the VDRL test for syphilis was nonreactive; a urine was negative for Bence Jones protein.

Aspiration of the radiolucent lesions with a 15-gauge needle yielded no blood or exudate. Biopsy specimens taken from the right and left mid-body and symphysis of the mandible were deep red in color and gritty in consistency. Microscopic examination of the biopsy tissue revealed a benign lesion, predominantly fibrous in nature and highly vascular. Mononucleated giant cells were observed along with pericapillary eosinophilic cuffing (Figure 2). The microscopic diagnosis was consistent with a lesion of hyperparathyroidism, giant cell reparative granuloma and cherubism.

Further investigation into the family history disclosed a five-year-old sister and a seven-year-old brother with a similar condition. A diagnosis of cherubism was made and the patient was discharged from the Navy.

DISCUSSION

The first case of cherubism was reported in 1933 by Jones who coined the term "cherubism," which was descriptive of the clinical appearance and facial deformity of patients who present the disease.[1]

Anderson and McClendon concluded, after studying 65 cherubism patients from 21 families, that the condition was familial.[2]

Cherubism manifests itself early in life. Patients generally exhibit progressive painless swelling of the jaws with no associated systemic manifestations. The dentition is usually defective with the teeth being displaced, absent or failing to erupt.

Radiographically, the lesion presents multiple, well-defined multilocular radiolucencies in the mandible or maxilla. The cortices are thinned and actual perforation of the cortices may occur.

Laboratory data is usually within normal limits. Microscopic appearance is characterized by the presence of a great number of large multinucleated giant cells

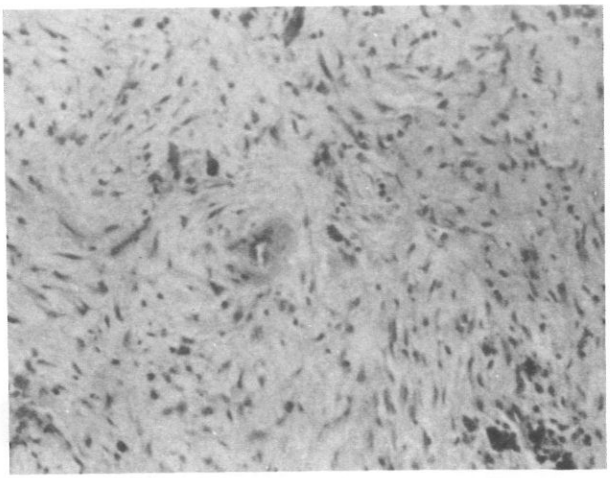


Figure 2.—Photomicrograph of lesion showing mononucleated giant cells and pericapillary eosinophilic cuffing.

in a loose delicate vascular fibrous connective tissue. A peculiar perivascular eosinophilic cuffing of small capillaries is often observed.

The disease tends to become static, regressing as the patient approaches puberty. No treatment is usually rendered for cherubism unless the lesion interferes with the airway or with swallowing. If treatment is rendered, it consists of a simple recontouring of the overgrowth.[3]

SUMMARY

In diagnosing the case presented here, a differential diagnosis of osseous radiolucent lesions had to be considered. The list was further narrowed to include fibrous dysplasia, cherubism, central giant-cell reparative granuloma, brown tumor of hyperparathyroidism, ameloblastoma, dentigerous cyst, histiocytosis, multiple myeloma and metastatic neoplasm. The final diagnosis was established on the basis of historical, clinical, laboratory, radiographic and microscopic findings.

REFERENCES

1. Jones WA: Familial multilocular cystic disease of jaws. Am J Cancer 17:946-950, Apr 1933.

2. Anderson DE and McClendon JL: Cherubism—hereditary fibrous dysplasia of the jaws. I Genetic considerations; II Pathologic considerations. Oral Surg 15 (Suppl 2):5-42, 1962.

3. Hamner JE, 3d and Ketchum AS: Cherubism: an analysis of treatment. Cancer 23:1133-1143, May 1969.

Mass Casualty Planning

Naval Regional Medical Center
Portsmouth, Virginia 23708

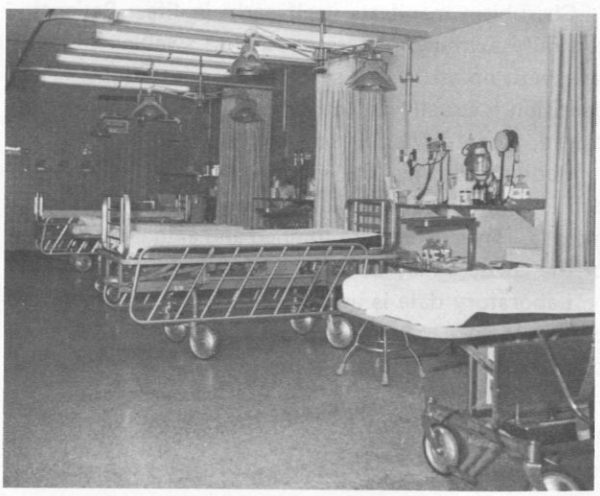
"There has been a disaster in the area and at least 20 patients are on their way to your hospital. You can expect to receive them momentarily."

The Naval Hospital Portsmouth does not hope to receive such a message. If a mass casualty situation occurs, however, the hospital is now better prepared to handle the casualties than at any other time in its long history, as a result of an emergency-room renovation project. Immediate benefits are being realized in the day-to-day operation of an emergency room that provided initial care and treatment for about 7,000 patients with acute injuries and illnesses during a recent three-month period.

"Before" and "after" pictures of the emergency room arrangement provide a startling contrast. The pre-renovation scene presents two operating rooms and two small, often-crowded, doctors' offices with stationary examination tables. Doctors carried otoscopes and ophthalmoscopes with them; manometers for taking blood pressure were usually kept on a table or desk, and most other equipment was brought into the office as required.

With expansion, a spacious bay-like area that contains four treatment cubicles, with one gurney (movable bed) per cubicle, has replaced the doctors' offices as the focal point for treatment. Most required equipment is just a step (or less) away. Each cubicle contains suction, oxygen, otoscope, ophthalmoscope and a manometer—all of which are wall-mounted. In addition, each cubicle contains intravenous solutions, overhead intravenous poles, overhead blood drawing equipment and a call button for summoning additional assistance. Emergency room personnel have expressed appreciation for the roominess, improved illumination, ease of access to equipment and facile working conditions of the new arrangement.

One operating room has been eliminated and the second refurbished with modern, sophisticated equipment. Again, ease of access to equipment has won approval. The operating room now offers: wall-mounted outlets for nitrous oxide, oxygen, and suction which are movable on overhead tracks;



The renovated emergency-room area includes four treatment cubicles with one gurney per cubicle.

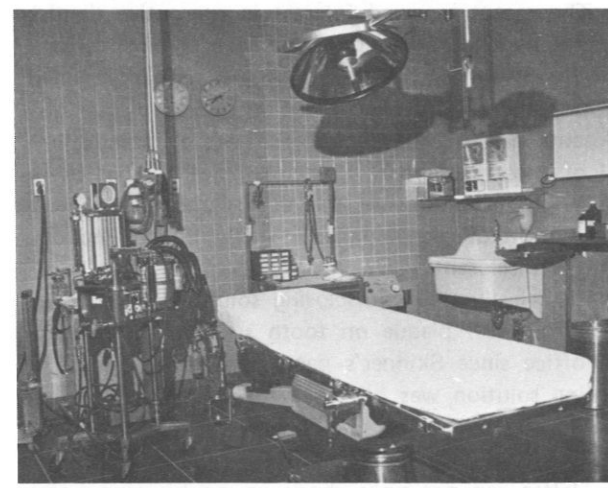
Wall-mounted equipment provides easy access for emergency room personnel. Provision of shelves in each cubicle (rather than cabinets) further enhances the accessibility factor.

overhead intravenous poles; a defibrillator for use in treating cardiac arrest; an anesthetic machine; and X-ray view boxes.

Doors are situated at both ends of the large area housing the cubicles, permitting an uninterrupted circular flow of patients during a mass casualty incident. In a casualty disaster medical teams would initially examine patients in an adjacent lobby that can be rapidly set up as a triage area. Victims requiring immediate resuscitation from shock or life-threatening injuries would be taken through one door, treated, and removed through the second. This is in vivid contrast to the "before" picture, where doorway congestion must result as one patient is brought into a doctor's office while a second patient is being removed through the same portico.

What is the expansion potential of the emergency room where no more than four people are normally treated simultaneously (one per cubicle)? This consideration played a prominent role in the Portsmouth Naval Hospital's planning for a mass-casualty situation. Each treatment cubicle can accommodate a second gurney, and, a double-overhead light in each cubicle allows for appropriate adjustment of illumination. The area has sufficient space for additional gurneys or equipment. For example, X-ray equipment could be brought into the space when preliminary X-ray studies are indicated, without seriously crowding the medical teams or disturbing a patient that should not be transported further. Substitution of gurneys for stationary examination tables enhances the easy portability of patients who are to be admitted, or who require definitive X-ray examinations.

Although the renovation project was primarily undertaken to improve preparedness for mass-casualty situations, hospital officials emphasize that the modernization has produced a more pleasant atmosphere for all patients who must use the facility and has increased the efficiency with which they can be treated.



The operating room in the emergency-room area has been refurbished as part of the renovation project.

MARRIED FEMALE MEMBER BENEFITS: DOD IMPLEMENTS COURT RULING

The Department of Defense (DOD) has notified all the military services that married female service members no longer need to prove the dependency of their civilian husbands to draw married BAQ, or for the husband to be eligible for dependent medical benefits.

The change was announced 1 June, but is retroactive to 14 May 1973, the date of the Supreme Court decision in the case of Frontiero vs. Richardson. The Court ruled in that case that certain proof-of-dependency requirements placed on female service members, but not on male service members, were unconstitutional.—CHINFO Weekly Newsgram, (22-73).

An Evaluation of Plaque Disclosants: Clinical Significance

By CDR Richard C. Edwards, DC, USN,*
and
LCDR William W. Sullivan, DC, USN.**

The recent renewed interest in preventive dentistry has permeated the literature with a bewildering variety of approaches and programs primarily aimed at personal plaque control. The use of plaque disclosants has become an integral part of practically all of these methods. Epidemiological studies in relation to dental disease and device studies utilize some form of plaque index, usually in conjunction with a disclosant.

Historically, many disclosing solutions have been used to reveal plaque on tooth surfaces in the dental office since Skinner's paper[1] in 1914. A disclosing solution was not used by the patient however until 1943 when Raybin[2] suggested its use to be "...placed into the hands of the patient so that the latter can not only check up on his own home care, but can also perfect his technique." He listed the uses and graded the characteristics of various disclosing solutions. Arnim's 1963 study[3] popularized the use of erythrosin dye as a disclosant; however, reports[4,5] indicate that this agent is antimicrobial and should not be used in longitudinal studies. Caldwell[5] suggested the use of fast green as a disclosant for quantitative evaluation of dental plaque. Brilliant[6] and Hefferren[7] suggested the use of fluorescent agents as plaque disclosants.

The ideal characteristics and uses of plaque disclosants today are quite similar to those of the past. Dental plaque disclosants are presently advocated for use as follows:

1) By the therapist in plaque-control-instruction programs, revealing the plaque present to both the patient and therapist;

2) By the patient at home to assess and perfect his personal plaque control;

3) By the dentist or hygienist as an aid to dental prophylaxis;

4) By the researcher who incorporates plaque indices into his protocol.

The ideal characteristics of a dental plaque disclosant are as follows:

1) It should specifically stain bacterial plaque so that it is readily distinguishable from other tooth-accumulated material (pellicle, calculus, etc.).

2) It should contrast with the gingiva, so that a distinction between plaque and gingiva is easily discerned.

3) It should be nonpathogenic to the patient, and nonantibacterial if used in quantitative plaque research.

4) It should be convenient and pleasant to use, and esthetically acceptable to the patient.

The typical practitioner desiring to utilize a disclosant has no particular rationale for selecting

*Director, Oral Physiotherapy Center, Dental Dept., U.S. Naval Academy, Annapolis, Md. 21402.
**Dental Dept., U.S. Naval Academy, Annapolis, Md. 21402.
The opinions or assertions contained herein are those of the authors and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

an ideal agent from the multitude of available products on the market today. The characteristics of various disclosants should dictate the proper use of each agent.

Disclosing agents are routinely utilized at the Naval Academy in the Plaque Control Orientation Center (PCOC), for personal-plaque-control instruction,[8,9] and as an adjunct to research[10,11] at the center. Recent reports[12,13] suggest that a fluorescing plaque disclosant is ideal for both personal-plaque-control instruction, and research utilizing plaque indices.

A study was conducted at the Naval Academy to compare the fluorescing disclosant to an agent that was used in previous studies.[10,11] It was found that the fluorescent solution fulfills the ideal characteristics of a disclosant and the previously used solution fell short of these criteria.

The purpose of this study in a plaque-control research program, was to compare the use of the fluorescent plaque disclosant to two other agents (erythrosin and fast green) suggested for this purpose.[3,5]

MATERIAL AND METHODS

One hundred and sixty-six midshipmen scheduled for plaque-control instruction were selected at random and assigned to one of three experimental groups. All subjects were given a Gingivae-Gingival Depth Index[11] examination, and no significant mean-score differences were found among the group prior to plaque-control instruction.[8,9]

Each subject was given a plaque-assessment examination (utilizing the Navy Plaque Index-Modified procedure)[11] prior to the initial plaque-control orientation session. The variable in this study was the disclosant used by each group during the instruction and examination period. Group A consisted of 78 subjects who utilized a fluorescent disclosing solution;* Group B contained 58 subjects using a 5% fast-green solution, and; thirty subjects comprising Group C used a 5% erythrosin solution.

One week following the completion of plaque-control instruction, all subjects were reassessed for plaque; the significant differences between these mean scores and the initial mean scores were statistically determined by analysis of variance procedures (p=.05).

RESULTS

The mean plaque scores are presented in Tables I and II. No significant difference in the mean plaque scores of the three study groups, at either pre-test or post-test assessment, was demonstrated. All three groups showed significant improvement in their post-test scores, compared to their pre-test examinations. The percentage of plaque reduction among the groups was not significantly different and averaged 69.6% for all subjects.

DISCUSSION

The results of this study indicate that the fluorescent disclosing agent is an acceptable substitute for fast green or erythrosin in research or clinical instruction. Where a disclosant in conjunction with a plaque index is used, the fluorescent agent can be utilized for quantitative plaque assessment and fulfills all of the characteristics of an ideal disclosant.

Fast green stains plaque and can be used for quantitative assessment in research; however, it does not lend itself to plaque-control-instruction programs. Esthetically fast green is objectionable to the patient because it stains the lips, tongue, and gingiva; and it does not provide a distinct contrast between plaque and the stained gingiva when used by patients

TABLE I

MEAN PLAQUE SCORES*

STUDY GROUP	NUMBER OF SUBJECTS	PRE-TEST	POST-TEST	PERCENTAGE REDUCTION
A	78	4.10	1.24	.695
B	58	4.56	1.48	.675
C	30	4.26	1.18	.723

* Mean plaque scores per tooth.

* Plak-Lite, International Pharmaceutical Corporation, Warrington, Pa.

TABLE II

MEAN PLAQUE SCORES*

STUDY GROUP	NUMBER OF SUBJECTS	PRE-TEST		POST-TEST	
		RANGE	MEAN SCORES**	RANGE	MEAN SCORES**
A	78	61-4	24.61 ± 8.90	31-0	7.46 ± 6.80
B	58	60-2	27.39 ± 9.16	28-0	8.87 ± 7.57
C	30	62-6	25.56 ± 9.88	19-0	7.06 ± 5.48

* Mean plaque scores for six scored teeth (3,9,12,19,25,28).

** Mean ± standard error.

as a rinsing solution.

In addition to the antimicrobial property of erythrosin that makes it unacceptable in quantitative-plaque research, erythrosin has the same esthetic disadvantages as fast green.

SUMMARY

The uses and ideal characteristics of a dental-plaque disclosant have been reviewed.

A total of 166 midshipmen were selected to evaluate the use of fast green, erythrosin, and a fluorescent disclosing solution in a plaque-control-instruction program.

There was no significant difference in the plaque scores achieved using the three disclosants, and the average mean percentage of plaque reduction (one week following instruction) was 69.6%.

These observations suggest that a fluorescent disclosant is an acceptable agent for use in research and fulfills the ideal characteristics of a dental-plaque disclosant.

REFERENCES

1. Skinner FH: The prevention of pyorrhea and dental caries by oral prophylaxis. Dental Cosmos 56:299-309, 1914.

2. Raybin M: Disclosing solutions, their importance and uses. Dent Outlook 30:159-162, 1943.

3. Arnim SS: The use of disclosing agents for measuring tooth cleanliness. J Periodontol 34:277-245, 1963.

4. Begue WJ, Bard RC and Koehne GE: Microbial inhibition by erythrosin. J Dent Res 45:1464-1467, 1966.

5. Caldwell RC and Hunt DE: A comparison of the antimicrobial activity of disclosing agents. J Dent Res 48: 913-915, 1969.

6. Brilliant H: The Use of a Fluorescent Disclosing Solution. University of Pennsylvania, Philadelphia, 1960.

7. Hefferren JJ, Cooley RO, Hall JB, Olsen NH and Lyon HW: Use of ultraviolet illumination in oral diagnosis. J Am Dent Assoc 82:1353-1360, 1971.

8. Elliott JR: Naval Academy preventive periodontic program utilizing an oral physiotherapy center. US Nav Med News Letter 53:37-38, Apr 1969.

9. Elliott JR and Bowers GM: I. Preventive periodontics utilizing an oral physiotherapy center. J Periodontol 43: 214-216, 1972.

10. Elliott JR, Bowers GM, Clemmer BA and Rovelstad GH: III. Evaluation of an oral physiotherapy center in the reduction of bacterial plaque and periodontal disease. J Periodontol 43:221-224, 1972.

11. Elliott JR and Clemmer BA: On the reproducibility of periodontal indices. US Nav Med 59:41-43, Apr 1972.

12. Scientific Exhibit: A Comparison of Bacterial Plaque Disclosants in Gingivitis. American Society for Preventive Dentistry Convention, Chicago, 1971.

13. Lang NP, Ostergaard E and Loe H: A fluorescent plaque disclosing agent. J Periodont Res 7:59-67, 1972.

Emergency Medical Training for National Park Service Personnel

Our National parks and woodlands are the prime spots for recreational activities where families get away from it all and come to enjoy some old-fashioned relaxing. Needless to say, with thousands of persons scrambling daily into the National parks and forests, many accidents occur that often lead to serious injury and even death. In addition to accidents many serious illnesses arise as a result of natural causes, such as heart attacks, pulmonary arrest, childbirth, etc. The National Park Service has the responsibility to render aid to Park visitors and this includes provision of emergency care to victims of illness or injury. Because

COURSE PARTICIPANTS — First Row (left to right): CAPT C.C. Caldwell, MSC, USN, Commanding Officer, Field Medical Service School; Irv Mortenson; Roger Rudolph; Andrew Ringgold; Charles Cooper; Jim Walters; William Feraro; Larry Widdifield; and HMCS G.A. Miller, USN, Instructor.

Second Row (left to right): CAPT L.W. Gay, MSC, USN, Executive Officer, Field Medical Service School; Richard Wilburn, Coordinator of Park Ranger class; David Lange; Larry Van Slyke; Howard Overton; George West; Richard Hanks; Leon Liscomb; HMC P.K. Clifton, USN, Instructor; and SSGT G.W. Antoine, USMC, Instructor.

Top Row (left to right): LT P.R. Milliken, MSC, USN, Training Officer, Field Medical Service School; HM1 W.L. McQueen, USN, Instructor; Bob Thomas; John Rittenour; Charles Farrabee; Roy Jacobson; Norman Walls; George Bratton; Jack Fields; Cleveland Pinnix; Tom Black; HM1 M.B. Shrader, USN, Instructor; and HMCS F.C. Monk, USN, Instructor.

Park Ranger treats simulated casualties in the field.

Transporting a casualty for helicopter evacuation.

HMC P.K. Clifton evaluates treatment administered by a Park Ranger.

Jungle penetrator (a device used to evacuate a casualty to a helicopter through trees and heavy undergrowth).

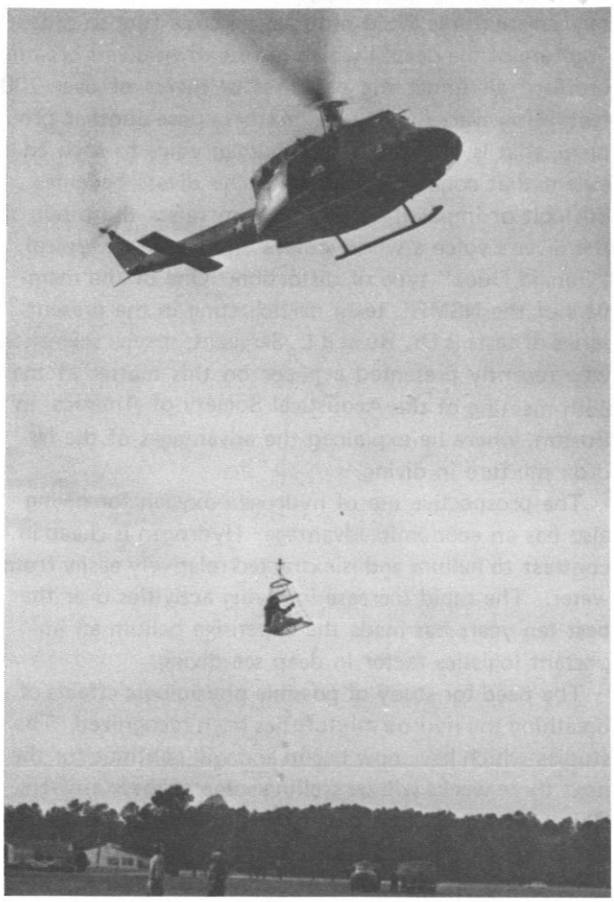
the number of visitors to the National Parks has increased greatly during the past few years, severe injuries resulting from accidents such as automobile, falls, heat and cold exposure, snake bite, etc., pose an ever-increasing problem in management. Many of these accidents occur in remote areas where long and often difficult carry-out of victims becomes necessary. At times a day's pack trip on horseback, or a long ride in a four-wheel drive vehicle is required before definitive medical care can be obtained.

Confronted by this problem in medical logistics, the National Park Service contacted the Commanding Officer, Field Medical Service School, Camp Lejeune, N.C., concerning the possibility of establishing a course in emergency medical training for National Park Rangers. At this time liaison was established with Headquarters, U.S. Marine Corps and approval was given to initiate a pilot training program.

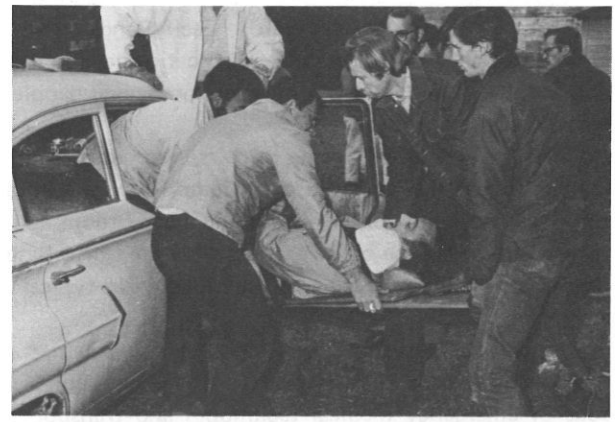
Over the weekend of 4-5 Nov 1972, National Park Rangers from various National Parks arrived at the

Field Medical Service School, Camp Lejeune, where they were met and welcomed aboard by CAPT C.C. Caldwell, MSC, USN, the Commanding Officer. On 6 Nov 1972, BGEN H.L. Wilkerson, USMC, the Commanding General, Marine Corps Base, Camp Lejeune, N.C., addressed the group, offering full cooperation and the hospitality of the Marine Corps Base toward the accomplishment of this special training course. Following the address by General Wilkerson, classes commenced on a Monday-through-Saturday schedule for the period 6-18 Nov 1972. The curriculum was based on the *Basic Training Program For Emergency Medical Technicians* published by the U.S. Department of Transportation.

The medical training received by the Park Rangers was presented by MSC officers and Navy hospital corpsmen on the staff of the Field Medical Service School. The course included classroom lectures and practical application in the field. The areas of instruction included the role, responsibilities, and equipment of emergency medical care; and mechanical aids to breathing. A host of definitive treatments for traumatic conditions was addressed, such as: bleeding; shock; fractures; airway obstruction and pulmonary arrest; injuries to the head, face, neck and spine; snake bite; heat and cold exposure; and childbirth. Participants also took part in classes in transporting patients for short and long distances. The use of intravenous fluids was also covered extensively. Demonstrations and practical application of transportation procedures were taught with the assistance of helicopters from the Marine Corps Air Station, New River, N.C. During this phase of training four types of evacuation methods were demonstrated. The sling, land-sea net, Neil-Robertson stretcher, and the jungle penetrator were demonstrated; the Rangers took a ride aloft in each type of equipment.



Demonstration of helicopter rescue capabilities.



Removal of a casualty from a wrecked automobile.

Lieutenant D. Irvine, Glen Echo Fire Department demonstrates how to remove a windshield from a wrecked automobile, to gain access to casualty.

Outside assistance, to instruct the students in emergency childbirth and cardiac arrest was provided by the Naval Hospital, Camp Lejeune, N.C. The methods used for the extrication of persons from wrecked automobiles was presented by representatives of the National Park Service Police and the Glen Echo Fire Department, Glen Echo, Md., using wrecked automobiles

obtained from a local junk yard. Each Ranger was given an opportunity to practice extrication techniques and actually use a variety of devices for freeing people from wrecked automobiles.

The Park Rangers, working in pairs, alternated evening watches at the Naval Hospital Camp Lejeune, where they observed and assisted in the emergency room and rode with ambulance crews from the Marine Corps Base Dispensary to observe procedures employed in typical emergencies.

The course culminated in a night field problem, thereby permitting each Ranger to apply his knowledge of emergency medical techniques and transportation for a wide variety of injuries, under adverse conditions.

Based on the comments received from the attendees, as well as their supervisors, the course was considered a great success. The National Park Service hopes that this type of training will continue in the future and steps have been taken to initiate the program at the Field Medical Service School, Camp Pendleton, Calif., as well as at Camp Lejeune.

A highlight of the Park Rangers' stay at Camp Lejeune was participation in the festivities on 10 Nov 1972 which marked the 197th Birthday of the United States Marine Corps.

USE OF HYDROGEN FOR DEEP DIVING

CAPT J.H. Baker, MC, USN, Officer-in-Charge of the Naval Submarine Medical Research Laboratory, announced today that a study of the use of hydrogen-oxygen breathing mixtures for deep diving is underway. The study has been christened PROJECT HYDROX II. Personnel from the Naval Submarine Medical Research Laboratory (NSMRL) will participate in a series of tests wherein divers will breathe hydrogen-oxygen mixtures in a hyperbaric chamber at pressure equivalent to a depth of 200 feet of sea water for exposure times in excess of 100 minutes per dive. It is thought that such hydrogen mixtures may supplant the helium-oxygen now used.

Dr. Charles F. Gell, Scientific Director of the Naval Submarine Medical Research Laboratory explained that the work is being done under contract from the Office of Naval Research and the Bureau of Medicine and Surgery. Dr Gell noted that Mr. Charles R. Carey, Technical Coordinator for the Laboratory, will travel to Harvey, La., with a team of scientists from the Laboratory who will work with the Research and Development Division of Michel Lecler, Inc., the company which has the contract. CDR Raymond L. Sphar, MC, USN, Assistant Officer-in-Charge of the Laboratory will also visit the site and supervise the NSMRL portions of the project, which will include pulmonary studies, biochemical estimates, behavioral scientific observations of performance, speech studies, and use of a doppler system which detects the presence of bubbles in the blood stream.

Scientists are turning to the investigation of hydrogen-oxygen mixtures in the hope that they may replace the currently used helium-oxygen mixtures. The helium-oxygen mixtures avoid nitrogen narcosis (the so-called "rapture of the deep") which results when divers breathe ordinary air under the pressures of divers of over 200 feet. However, the helium mixtures pose another problem, that is, they affect the human voice to such an extent that communication with the divers becomes difficult or impossible. The helium raises the pitch of the diver's voice a whole octave and gives it a typical "Donald Duck" type of distortion. One of the members of the NSMRL team participating in the present series of tests is Dr. Russell L. Sergeant, speech scientists, who recently presented a paper on this matter at the 85th meeting of the Acoustical Society of America, in Boston, where he explained the advantages of the hydrox mixture in diving.

The prospective use of hydrogen-oxygen for diving also has an economic advantage. Hydrogen is cheap in contrast to helium and is extracted relatively easily from water. The rapid increase in diving activities over the past ten years has made the expensive helium an important logistics factor in deep sea diving.

The need for study of possible physiologic effects of breathing the hydrox mixture has been recognized. The studies which have now begun and will continue for the next three weeks will be seeking some of these answers. Results should permit the scientific team to provide a better indication of the potential use of hydrogen in deep diving operations.—PAO, Nav Sub Med Res Lab, Nav Sub Base, Groton, Conn.

Navy Gastroenterologists Star in William Beaumont Symposium

The second William Beaumont Gastrointestinal Symposium for physicians of all the Federal Services interested in gastrointestinal problems was held at the U.S. Army William Beaumont General Hospital in El Paso, Tex., on 7-9 Mar 1973.

CAPT Donald O. Castell, MC, USN was honored as the recipient of the annual William Beaumont Award for Clinical Investigation, for his work on esophageal physiology and pathophysiology. CAPT Castell is Chief of the Clinical Investigation Service at Naval Hospital Philadelphia, and is a highly esteemed Editor and Gastroenterology Consultant for *U.S. Navy Medicine.*

CAPT D.O. Castell, MC, USN of Nav Hosp Philadelphia received the William Beaumont Award for Clinical Research at the 2nd Annual Gastrointestinal Symposium hosted by the William Beaumont Army Medical Center, at the Fort Bliss Officers Club. (Photo by courtesy of SP4 John Pollard, US Army Photo Facility, Fort Bliss, Tex.)

The Symposium was well supported by Navy gastroenterologists who presented eleven out of a total of 27 scientific papers. The eleven reports represented ongoing clinical investigation programs at four naval teaching hospitals.

LCDR J.Q. Stauffer, MC, USNR of Nav Hosp Great Lakes, presented "The Effect of Treatment of Hyperoxaluria With Cholestyramine in Patients With Regional Enteritis." Coinvestigators were LCDR M.H. Humphreys, MC, USNR and CDR G.J. Weir, Jr., MC, USN.

From Nav Hosp San Diego, LCDR O.T. Nebel, MC, USNR presented "Endoscopic Pancreatocholangiog-

LCDR J.Q. Stauffer, MC, USNR

LCDR O.T. Nebel, MC, USNR

LCDR J.B. Hollis, MC, USN

CDR R.D. Gaskins, MC, USN

CAPT D.O. Castell, MC, USN

raphy." CDR M.F. Fornes, MC, USN was coinvestigator. Dr. Nebel also reported on the recent collaborative work which he has completed with the Navy Medical Research Unit No. 3 in Cairo, Egypt, on "Schistosomal Polyposis: Endoscopic and Histologic Evaluation of Medical Therapy."

From Nav Hosp Bethesda, CDR R.D. Gaskins, MC, USN reported on "Pathogenesis of Lower Esophageal Sphincter Incompetence." These studies were performed in collaboration with LCDR W.H. Lipshutz, MC, USNR and RADM-select W.M. Lukash, MC, USN.

LCDR J.B. Hollis, MC, USN gave two reports on his work with esophageal physiology and pathophysiology, discussing both "Esophageal Dynamics in Hypergastrinemic Pernicious Anemia Patients," and "Presbyesophagus: A New Look." These studies were conducted in collaboration with CAPT Castell, Chief, Clinical Investigation Center, Nav Hosp Philadelphia. Additional contributions from this unit were concerned with the physiology and pathophysiology of the lower esophageal sphincter. CAPT Castell reviewed the work accomplished by the Nav Hosp Philadelphia Gastroenterology Branch, on "The Mechanism of Fat Inhibition of the Lower Esophageal Sphincter." LCDR O.T. Nebel had participated in this investigation prior to his transfer to the present staff position at Nav Hosp San Diego.

LCDR R.H. Higgs, MC, USNR presented new information on the "Cholinergic Response of the Lower Esophageal Sphincter in Patients With Antrectomy and/or Vagotomy," summarizing recent observations made by himself and CAPT Castell.

LCDR R.L. Farrell, MC, USN offered his new and exciting observations on the effect of "Stimulation of the Incompetent Lower Esophageal Sphincter: A Possible Advance in Therapy of Heartburn." Dr. Farrell returned to the podium subsequently to discuss recently completed collaboration with CAPT A.R. Chappelka, MC, USN at Nav Hosp Philadelphia, on the "Significance of Abnormal Liver Function Studies in Psychiatric Admissions to Military Hospitals."

The Navy's program was completed by a discussion of "Changes in Small Bowel Microflora in Acute Undifferentiated Diarrheal Disease," delivered by CAPT A.R. Chappelka, Jr., MC, USN. The latter study was conducted in the Clinical Investigation Center at Nav Hosp Philadelphia, in collaboration with Dr. M.D. Dickman.

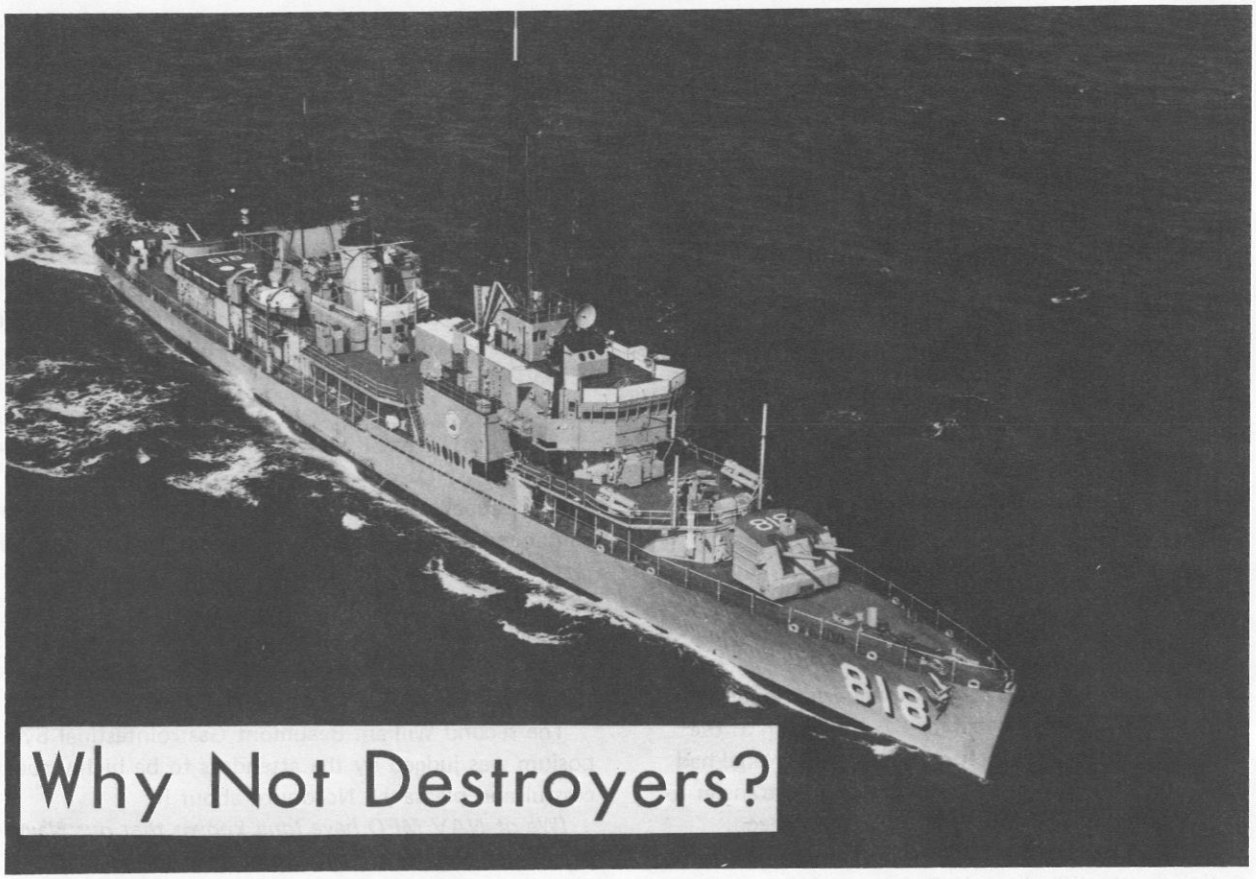
An added highlight was the very informative address given by RADM-select W.M. Lukash, MC, USN, entitled "Observations on Medicine in China."

The second William Beaumont Gastrointestinal Symposium was judged by the attendees to be highly successful and pleasant. No doubt about it.

(We of NAV MED have long known that our Navy gastroenterologists are something very special. The Army's evidently on to it. That's very nice.—Ed.)

LCDR R.H. Higgs, MC, USNR

LCDR R.L. Farrell, MC, USN



Why Not Destroyers?

By LT Robert W. Doebler, MC, USNR,*
Staff, Commander Escort Squadron EIGHT
FPO New York 09521.

Although the yearly medical training cycle has not yet reached the long and painfully awaited halfway point, nevertheless, it is already time for Navy interns to seriously consider their desires regarding their next assignment, and to consider what is felt to be an extremely exciting opportunity with the Destroyer-type ships of the Operating Forces. It is hoped that this article will spur young medical officers to seek such assignments and will serve as a pleasurable reminiscence for those "old salts" who have previously enjoyed such duty.

John Steinbeck has stated that, "a destroyer is a lovely ship, probably the nicest fighting ship of all"; with almost 50% of the Navy's 700 in-service ships (many of them destroyers, frigates, and escort vessels) over 20 years of age,[1] this statement may appear to be somewhat of an exaggeration. Furthermore, no one would deny the beauty of an attack aircraft carrier, and the associated prestige and romance of wearing the wings of a flight surgeon. Nor would anyone seriously question the frozen beauty of the South Pole and understandable aspirations to participate in Operation Deep Freeze. Finally, one can not lightly dismiss the beauty of the ocean depths and the inherent challenge in duty as a submarine medical officer. Nevertheless, the less glamorized and seemingly forgotten ships of the Destroyer fleet do present a beautiful and stimulating sight. No experience could be more memorable

---

*Dr. Doebler is now a member of the staff at Naval Hospital Philadelphia, Pa. Mailing address: Village of Pine Run, Blackwood, N.J. 08021.

The opinions or assertions contained in the above article are those of the author and cannot be construed as reflecting the views of the Navy Department or the naval service at large.

or mystical than standing on the bridge of "your" ship as she maneuvers from a crowded harbor nest; or approaches an oiler at 20 knots during an underway-refueling evolution; or simply steams quietly along at night, with nothing but the vastness of the ocean and the black beauty of the universe to record her presence. In the same fashion, duty as a medical officer in ships of this type can, in many other ways, provide a "beautiful" and highly rewarding tour of duty.

Just what are these "destroyers," what do they do, and where are they located? To begin with, it is important to point out that the majority of the Navy's forces are included within one of four heterogenous and flexible groups: the Pacific Fleet; the Atlantic Fleet; the U.S. Naval Forces, Europe; and the Military Sealift Command.[2] These forces are under the administrative/logistic command of the Chief of Naval Operations, and under the operational command of their respective unified commanders (i.e. Commander-in-Chief Pacific, etc.). Within the former two groups, these forces are divided (primarily for administrative purposes) into homogeneous divisions based upon their unique capabilities; these divisions are known as *type commands* and include, among others, Mine Forces, Submarine Forces, Amphibious Forces, Naval Air Forces, Fleet Marine Forces, and Cruiser-Destroyer Forces. The latter group represents the type command of importance in this article, and consists of a myriad of different ships of the Cruiser or Destroyer classification, the exact specifications and abbreviations of which would confuse even most line officers. Included within, but not totally comprising this group are: Heavy Cruisers (CAs), Guided Missile Cruisers (CGs), Destroyers (DDs), Guided Missile Destroyers (DDGs), Guided Missile Frigates (DLGs), nuclear-powered

IN THE MEDITERRANEAN SEA.—USS *Barney (DDG-6)*, a guided-missile destroyer, is a pleasant sight.

UNDERWAY OFF THE COAST OF SOUTHERN CALIFORNIA.—The Destroyer USS *Hull (DD-945)*.

Guided Missile Frigates (DLGNs), and Escort Ships (DEs).[3] These forces, together with aircraft carriers and their accompanying air wings, comprise the major element of the Navy's *surface* warfare unit. As such, during peacetime their operations revolve around training exercises, detecting and tracking enemy vessels (both surface and subsurface), acting as escorts for larger ships and convoys, and presenting a highly effective and mobile military deterrent throughout the World. During times of war, these operations would be expanded to include active antisubmarine warfare, detection and engagement of enemy surface units, and shore bombardment.

For the most part, American Naval ships are homeported at facilities on the eastern or western coast of the United States (Norfolk, Va., and San Diego or Long Beach, Calif., respectively, for example), and at Pearl Harbor, Hawaii; there are also several "forward deployed" units located at Naples, Italy; Yokosuka, Japan; and in the near future, at Athens, Greece. The normal 18-month rotation for ships home ported in the U.S. consists of a several-month period of preparation and training, followed by a four- to six-month cruise within their respective geographic regions (i.e., Western Pacific for West Coast ships, and Northern Europe or the Mediterranean Ocean for those on the East Coast); and upon return, a final period of material repairs and renovation, limited local operations, and liberal personnel leaves. Ships from home ports located overseas conduct essentially continuous "local" operations, and thus perform on a somewhat different schedule; the total time in port and at sea, however, is approximately the same for both groups.

What is the role of the medical officer with regard to these forces? Simplistically, he is in charge of any

and all aspects of the ship's overall mission which have medical implications. Every U.S. Navy ship includes within its organizational structure a Medical Department, which materially consists of a sickbay stocked with various diagnostic and therapeutic supplies; and from a personnel standpoint, *at least* one First Class (or higher rated) Hospital Corpsman is included. Larger ships of the Cruiser-Destroyer type have had in addition, at least one billet for a medical officer who operates continuously with that particular ship and is the head of the Medical Department. The smaller vessels of this type do not have such billets and, in these cases, their Hospital Corpsman is designated as the Medical Department Representative who conducts the routine medical activities of the ship. Under the latter circumstances, medical officers are not assigned to a specific ship, but rather serve as medical advisors on the staff of the commander of a group of such ships (usually a division or a squadron), dividing their operational time between the various vessels in the group.

Whether assigned to a single ship or a unit staff, the medical officer's duties are similar and quite numerous. He is, of course, primarily a physician and as such, is responsible for the medical well-being of every man within his "domain." This responsibility includes the treatment of many patients with such mundane problems as "colds," warts, and GC urethritis, but may also include such difficult and demanding problems as a bleeding ulcer or acute appendicitis, while the ship or unit is underway and facilities are limited. Nothing exerts a more sobering (nor oftentimes more maturing) influence, medically and generally, than to realize that you are "in charge" under such conditions, and that the decisions which you, and you *alone* must make could determine a patient's fate.

OFF SANTA CATALINA ISLAND.—The escort ship USS *Francis Hammond (DE-1067)* is named after HN Francis C. Hammond, USN who was killed in action in Korea on 27 Mar 1953, while serving in the FIRST Marine Division. Hospitalman Hammond was awarded the Medal of Honor posthumously, for gallant action.

Furthermore, the medical officer is also a *Naval officer.* One of the most stimulating and educational aspects of this type of duty is the inevitable process of developing the ability to successfully rationalize and coordinate the principles of quality medical care with the needs and limitations of the Operating Naval Forces. An important concept evolves, which unfortunately can only be partially perceived at a naval hospital or dispensary, and yet the perspective is one which every career-oriented medical officer should seek to understand fully and apply constantly. The process can be highly instructive.

Third, the "operational" medical officer is a teacher. The hospital corpsmen working with him are highly qualified individuals who usually have more clinical experience than he, but who are also quite eager to increase their own store of medical knowledge. Their questions (especially those of a more practical nature) often baffle and embarrass their "teacher," and certainly stimulate him to search for intelligent answers.

Fourth, this type of duty forces a physician to become an epidemiologist, responsible for and interested in the overall sanitation of his ship or unit. Such diverse considerations as the cleanliness and health of food handlers, the safety of potable water, and the control of infectious diseases become highly significant.

Finally, this medical officer assumes the role of an amateur administrator who must quickly acquire valuable skills in dealing effectively with superiors and subordinates alike, in maintaining countless important but time-consuming records, and in practicing budgetary constraint when impulse would suggest otherwise.

Obviously, a medical officer assigned to the Cruiser-Destroyer Force is expected to be, or develop into an intelligent, effective, and highly flexible military physician. Admittedly, there are drawbacks to this type of duty. The scope of medical stimulation encountered within a residency program is far broader than that experienced while participating in an operational tour; The separation from one's family during a lengthy cruise is not an easy adjustment; And even the most stoic physician may, at times, become frustrated and irritated while attempting to practice his art under the often watchful, and medically-uneducated eyes of his line superiors. Yet the opportunities for growth, both as a well-rounded physician and as a Naval officer are unlimited, and many benefits accrue to those who overcome the disadvantages and successfully accomplish the assigned mission. Aside from those already stated or implied, consider other significant gains: the respect and confidence

(Continued on p. 52)

DRILL LOCATION OF NAVAL RESERVE MEDICAL COMPANIES

Effective 1 Jul 1973, Naval Reserve Medical Companies and all other Phased Forces Specialist Companies are required to drill at their respective Naval Reserve supporting activity, designated contributory support site, or other location previously approved by the Naval District Commandant. Deviations from this policy will be subject to waiver action and will require approval of the appropriate Naval District Commandant. Any waivers which are granted, will be on a fiscal year basis. —Code 36A, BUMED.

RESERVIST PX PRIVILEGES

Unlimited Navy and Post Exchange privileges have been extended to Naval reservists in a drill status. Recently approved by the Department of Defense (DOD), the new benefit is extended to all Reservists and Guardsmen during their actual day of training. In addition to their red identification card, reservists must produce a statement, from the commanding officer of their unit, which indicates the day or weekend during which the reservist is drilling.

In the past, Reserve members were only allowed limited purchase power to cover "convenience" items. The exchange privilege for drilling reservists does not apply to commissaries.

DOD officials say that this action is regarded as a move to enhance morale and recruiting, emphasizing that today's reservists are part of the same team as active duty personnel.—CHINFO Newsgram (23-73).

NAVY DENTAL CORPS CONTINUING EDUCATION PROGRAM

The Continuing Education Courses conducted at the Naval Graduate Dental School, National Naval Medical Center, Bethesda, Md., and the Naval Dental Center, San Diego, Calif., are scheduled during Fiscal Year 1974 as follows:

Naval Graduate Dental School, Bethesda

Courses	*Dates*		
Occlusion	24-28	Sep	1973
Oral Diagnosis and Treatment Planning	1-5	Oct	1973
Operative Dentistry	15-19	Oct	1973
Oral Surgery	5-9	Nov	1973
Maxillofacial Prosthetics	12-16	Nov	1973
Dental Radiology	26-30	Nov	1973
Endodontics	3-7	Dec	1973
Oral Pathology	7-11	Jan	1974
Removable Partial Dentures	21-25	Jan	1974
Fixed Partial Dentures	4-8	Mar	1974
Preventive Dentistry	11-15	Mar	1974
Complete Dentures	25-29	Mar	1974
Periodontics	8-12	Apr	1974
*Management Seminar	29	Apr	— 3 May 1974

*Limited to active duty naval dental officers with the rank of senior commander or junior captain.

Quotas have been assigned to District and Staff dental officers for career dental officers, and Reserve

dental officers on active duty on a space-available basis. District Commandants have likewise been assigned quotas for eligible inactive Naval Reserve dental officers.

For courses at the Naval Graduate Dental School, applications from career officers and Reserve officers on active duty are to be submitted via the chain of command, and in accordance with current directives, to the Chief, Bureau of Medicine and Surgery (Code 611), Navy Department, Washington, D.C. 20372, using the format shown in MANMED article 6-130. Active status Naval Reserve dental officers on inactive duty will apply to the appropriate Commandant via the Director of Dental Activities, or the District Dental Officer, as applicable.

Naval Dental Center, San Diego

Courses	*Dates*
Removable Partial Dentures	10-12 Sep 1973
Fixed Partial Dentures	1-3 Oct 1973
Endodontics	15-17 Oct 1973
Operative Dentistry	12-14 Nov 1973
Occlusion	3-5 Dec 1973
Oral Diagnosis	7-9 Jan 1974
Complete Dentures	28-30 Jan 1974
Maxillofacial Prosthesis	4-6 Feb 1974
Oral Surgery	18-20 Mar 1974
Preventive Dentistry	1-3 Apr 1974
Periodontics	13-15 May 1974

For courses at the Naval Dental Center, San Diego, career dental officers and Reserve dental officers on active duty should submit their applications via the chain of command, and in accordance with current directives, to the Commandant, Eleventh Naval District (Code 37), San Diego, Calif. 92132, using the format contained in MANMED article 6-130. Active status Naval Reserve dental officers on inactive duty will apply to the appropriate Commandant.

Applications for courses at both facilities should be submitted so as to be received at least one month prior to the convening date of the course. Officers will be notified regarding the action taken on their requests. Those approved will be nominated for TAD, authorization orders, or active duty for training, as appropriate. —Code 611, BUMED.

RADM M.G. TURNER HONORED

In sincere appreciation of his dedicated service to the dental profession, the U.S. Navy, and dental education, the faculty and alumni of the College of Dentistry of Ohio State University conferred upon RADM Myron G. Turner, DC, USN (Ret.) their distinguished alumni award. The plaque was signed by Dr. John R. Wilson, Dean, College of Dentistry, and by Dr. William C. Dew, Associate Dean.

RADM Joseph W. Williams, Jr., USN, Commandant, ELEVENTH Naval District presented the award to RADM Turner in a pleasant ceremony attended by CAPT Kenneth M. Broesamle, DC, USN (Ret.), and RADM Anthony K. Kaires, DC, USN, Director of Dental Activities, ELEVENTH Naval District.

DISTINGUISHED ALUMNI AWARD.—Attending the presentation ceremony in honor of RADM Myron G. Turner, DC, USN (Ret.), are (from left to right): CAPT Broesamle, DC, USN (Ret.); RADM J.W. Williams, Jr., USN; RADM Turner; and RADM A.K. Kaires, DC, USN.

EDWARD C. PENICK FUND

The Edward C. Penick Endodontic Study Club has established the Edward C. Penick Fund in the American Association of Endodontists' Memorial and Endowment Foundation. This nonprofit organization is dedicated to the advancement of endodontics through various channels, including student loans, research grants, and sponsorship of workshops and continuing education programs.

The objective of the new fund is to perpetuate and memorialize the name of CAPT Edward C. Penick, DC, USN (dec.) who, at the time of his death on 12 Apr 1971, was head of the endodontics department and director of the residency program in endodontics at the Naval Graduate Dental School. A nationally known clinician and educator in endodontics, CAPT Penick had many articles published in the dental literature and served on the Editorial Board of the journal, *Oral Surgery, Oral Medicine and Oral Pathology.* He was a Diplomate of the American Board of Endodontics, a Fellow of the American College of Dentists, a

member of the American Dental Association, and an honorary member of the American Association of Endodontists, in which he served as chairman of the Committee for Clinical Correlation of Research, and as a member of the Education Committee.

It is hoped that perpetuity of the Edward C. Penick Fund will reflect Dr. Penick's spirit of dedication to education. Disbursements from the fund will be limited to support of graduate education through research grants, scholarships, and student grants made in the name of Edward C. Penick.

It is anticipated that the fund will be maintained above the $1,000 required minimum balance by private contributions, as well as by contributions from the Edward C. Penick Endodontic Study Club, presently composed of 35 endodontists from the Metropolitan Area of Washington, D.C. Contributions may be made payable to the American Association of Endodontists Memorial and Endowment Foundation and mailed, with an indication that the contribution is for the Edward C. Penick Fund, to:

Mrs. Elenore Baker, Secretary;
American Association of Endodontists
Memorial and Endowment Foundation,
P.O. Box 11728, Northside Station,
Atlanta, Georgia 30305.

BETHESDA FEMLINE ESTABLISHED

Femline is a new telephone service available through the Obstetrics and Gynecology Service of Bethesda Naval Hospital. The phone service makes professional obstetrics and gynecology information readily available to the female (military and dependent) patients of the Washington, D.C. area, in an attempt to enhance the Navy Medical Department's objective of preventive medical care. Questions concerning pregnancy, abortion, birth control, venereal disease, etc., will be answered by physicians between 11:00 A.M. to 1:00 P.M., Monday through Friday. The patient need not identify herself. The Femline telephone number is 295-0533.

Information concerning clinic hours and appointments will not be available through this service and will be directed to the Central Appointment Number 295-1400.—PAO, NNMC, Bethesda, Md.

NEW MAXIMUM CARE UNIT

A ribbon-cutting ceremony was held at the Naval Hospital Annapolis, Md., on 27 Apr 1973, to signal the opening of a new Maximum Care Unit at that hospital. The unit has a capacity of eight beds for the care of coronary patients and others who require round-the-clock intensive nursing care. The latest patient-monitoring systems are incorporated into the unit which will aid in providing high-quality patient care.

CAPT F.W. Burke, MC, USN, Commanding Officer at Nav Hosp Annapolis, officiated at the ceremony. Other participants included RADM E.J. Rupnik, MC, USN, Assistant Chief for Planning and Logistics, BUMED; and LT C.J. Kelly, NC, USNR, Charge Nurse of the Maximum Care Unit.—AO, Nav Hosp Annapolis, Md.

CARDIAC MONITORING EQUIPMENT IN THE MAXIMUM CARE UNIT.—RADM E.J. Rupnik, MC, USN (left); LT C.J. Kelly, NC, USNR (center); and CAPT F.W. Burke, MC, USN, CO, Nav Hosp Annapolis (right), discuss the new Maximum Care Unit features. (Photo by courtesy of U.S. Naval Academy Photographic Lab.)

MOSELEY AWARD TO CAPT AUSTIN

The Harry G. Moseley Award was presented to CAPT Frank H. Austin, Jr., MC, USN at the Honors Night Banquet of the Aerospace Medical Association meeting on 10 May 1973, for his continuing contributions to flight safety. CAPT Austin is Director of the Aerospace Medicine Technical Division, BUMED, Department of the Navy, Washington, D.C. The Harry G. Moseley Award is given for the most outstanding contribution to flight safety, in memory of COL Moseley, sponsored by the Lockheed Corp.

A native of Kerrville, Tex., CAPT Austin received his M.D. degree from Southwestern Medical College in 1948, and his M.P.H. degree from the University of California at Berkeley in 1963. He entered the U.S. Navy in 1948 and his assignments have included: Developmental Project Pilot, Air Developmental Squadron,

Atlantic City, N.J.; Head of Aeromedical Test Branch, Patuxent, Md.; Flight Surgeon and Instructor, Naval Air Station, Cecil Field, Fla.; Medical Officer and Flight Surgeon, USS *Enterprise;* Head of Aeromedical (Life Sciences) Department, Naval Safety Center, Norfolk, Va.; and Medical Officer (Staff), Naval Air Forces, Atlantic.

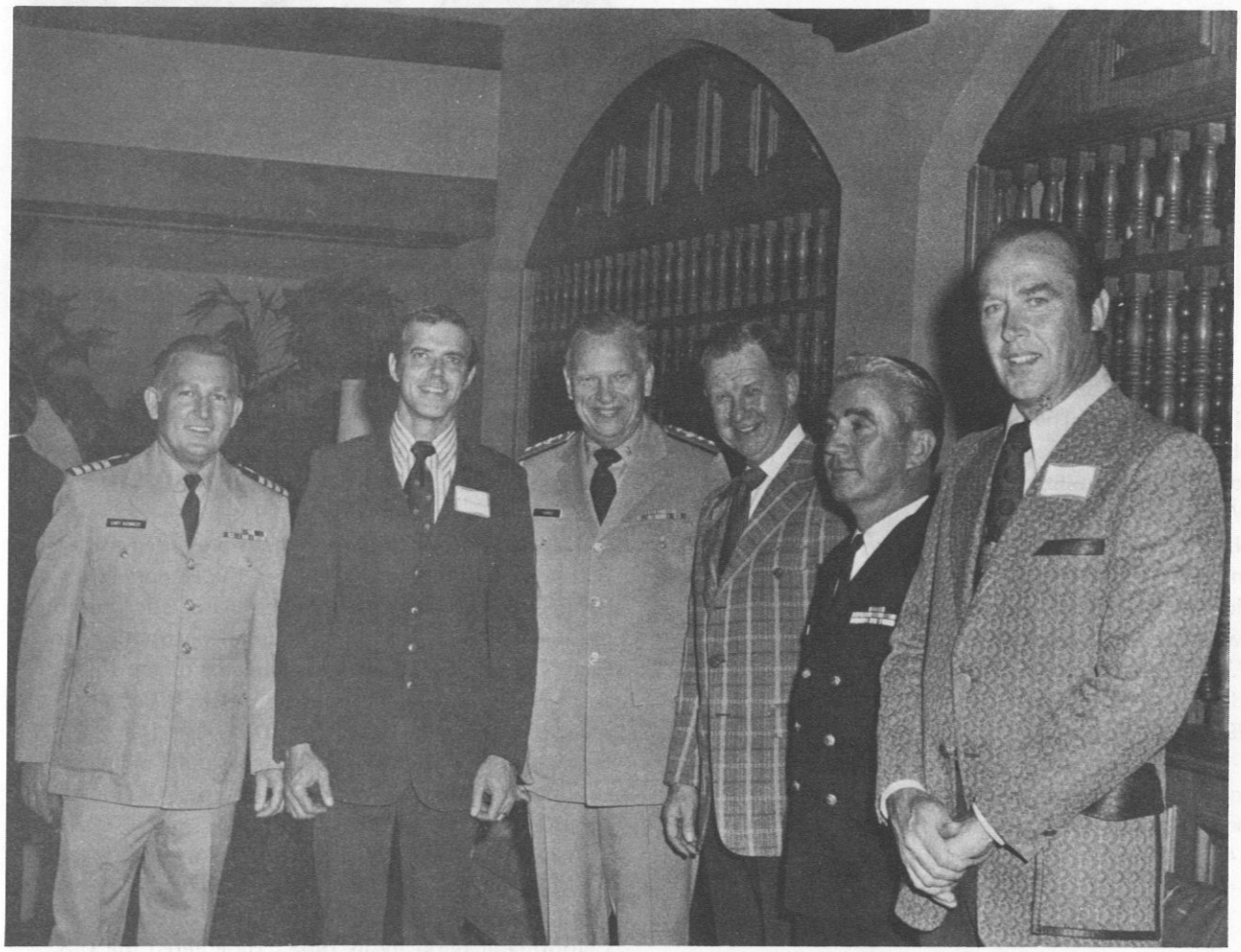
CAPT Austin is a Fellow of the Aerospace Medical Association, Associate Member of the Society of Experimental Test Pilots, and a member of the American Institute of Aeronautics and Astronautics. He is a rated flight surgeon and pilot.—Aerospace Medical Assoc., Washington, D.C.

NAVAL-CIVILIAN DENTAL SYMPOSIUM

The Sixteenth Annual Professional Military Dental Symposium of the Navy Dental Corps — San Diego County Dental Society was held 23 May 1973 at the Commissioned Officers Mess (Open), Naval Air Station, North Island, San Diego, Calif.

Sixteen table clinics were presented early in the evening followed by dinner at which the attendees were welcomed by RADM A.K. Kaires, DC, USN, Director of Dental Activities, ELEVENTH Naval District, and Dr. Alan B. Curtis, President of the San Diego County Dental Society. After dinner a presentation entitled "Photography in your Dental Office" was made by CAPT L.V. Hickey, DC, USN.

These annual meetings highlight the mutual friendly interchange of professional ideas between military and civilian dentists in the San Diego metropolitan area.



NAVY-CIVILIAN DENTISTS MEET.—Participating in a joint Dental Symposium conducted in San Diego were, (from left to right): CAPT W.J. Kennedy, DC, USN; Dr. R.B. Hancock, President-Elect, San Diego County Dental Society; RADM A.K. Kaires, DC, USN; Dr. C.H. Williams, President-Elect, American Dental Assoc.; CAPT L.V. Hickey, DC, USN; and Dr. A.B. Curtis.

OFFICIAL INSTRUCTIONS AND DIRECTIVES

BUPERSNOTE 1120 of 25 May 73

Subj: Appointment in the Medical Service Corps, U.S. Naval Reserve; application for

This notice prescribes policies and procedures by which qualified officer and enlisted personnel may submit applications for appointment to commissioned status in the various sections of the Medical Service Corps, U.S. Naval Reserve. Applications may be submitted for either active or inactive appointments; however, male applicants may not apply for inactive appointments unless they have completed their active duty obligations and, in the case of Naval Reserve officers on active duty, are eligible for release from active duty. Both men and women are eligible to apply for appointment, except for the specialty of radiation health, which is limited to male applicants. Applicants for appointment in the Medical Service Corps, U.S. Naval Reserve, must meet the basic eligibility requirements for initial appointment in the Naval Reserve prescribed in BUPERSMAN 1020100, and the appropriate professional requirements set forth in this notice.

The various sections of the Medical Service Corps for which applicants may apply are: health care administration, medical allied sciences, optometry, pharmacy, podiatry, and medical specialists (i.e., dietetics, physical therapy, and occupational therapy).

BUMEDINST 6220.5 of 24 May 73

Subj: Nosocomial Infection Control Program; establishment of

Provides guidance and information for the establishment of an effective program of nosocomial (hospital-associated) infection control for naval health care facilities, and outlines the basic elements, functions, and responsibilities of personnel involved in a continuing program.

The three basic elements of a nosocomial infection program are: the Infection Control Committee, surveillance, and control measures. An Infection Control Committee shall be appointed to establish uniform procedures for reporting infection, maintain records of infection among patients and staff personnel, and make recommendations for the appropriate remedial measures to be taken. Any unusual incidence of infection or the occurrence of an epidemic shall be reported to BUMED. In naval hospitals, a position of Infection Surveillance Officer (an appropriate MSC officer) shall be established. This officer shall be the Infection Control Committee's action member and be responsible for the compilation of epidemiological data relating to nosocomial infections.

The policies, reporting formats, and action outlined by this instruction are not considered to be all-inclusive in assuring an effective nosocomial infection control program. Policy and reporting procedures for an effective program must be adapted to meet local needs as well as to solve the problems of the individual medical facility.

MANMED Art 15-51

(This item represents an advance publication of Art 15-51, which will be promulgated by MANMED Change 79, to be distributed in approximately eight weeks.)

15-51 Weight Control

(1) General. Excess body fat is a serious detriment to health, longevity, stamina, and military appearance. Medical officers must be alert to identify obese members and those who show tendencies for becoming obese, and recommend preventive and remedial regimens to the commanding officer.

(2) Responsibilities. The commanding officer is responsible for the overall administration and enforcement of the command weight-control program as set forth in BUPERSMAN and MCO. Medical officers are responsible for participating in the enforcement of the weight-control program as directed by the commanding officer. Medical officers are specifically responsible for:

(a) Familiarizing themselves with the provisions of BUPERSMAN 3420440 and MCO 6100.3 (series). (The administrative processing instructions contained in these directives are applicable to enlisted members only.)

(b) Monitoring and assessing body weight as a routine part of their daily contact with members at sick call, and when conducting physical examinations.

(c) Evaluating obese and overweight members to rule out underlying or associated disease processes, and assessing the effect of excessive body fat upon a member's fitness for duty.

(d) Recommending weight-reduction goals and prescribing diets and exercise programs to fit the needs of each individual.

(e) Providing the commanding officer with the names of obese members, and recommending appropriate courses of action in each case based upon a professional opinion regarding the likelihood of success in weight-reduction program. This action is particularly important in the case of obese members being examined for reenlistment.

(f) Periodically reevaluating members participating in a weight-reduction program, assessing their progress, and keeping the commanding officer informed of the progress in each case.

(3) Application of the Weight Standards. The weight charts contained in article 15-17 must not be arbitrarily construed or applied. The fact that a member's weight exceeds the maximum for his height and age will not be utilized as the sole criterion for classifying him as obese. An evaluation of the body build, muscular development, and bone structure should be made, noting the proportions, symmetry of the various parts of the body, chest development, abdominal girth, and the condition and tone of the muscles. An overweight member who is obviously active, of firm musculature, evidently vigorous and healthy, and who presents a satisfactory military appearance, should not be classified as obese. In cases where doubt exists, front- and side-view photographs in bathing suit and in uniform, a complete physical examination report, and appropriate comments and recommendations from the medical officer and the commanding officer should be submitted to the Commandant of the Marine Corps (Code DM) or to the Chief of Naval Personnel (B2222), as appropriate, via Chief, Bureau of Medicine and Surgery (Code 3322) for consideration.

✝ In Memoriam ✝

CAPT Leonard W. Burr, MSC, USN died of cancer on 19 Apr, in San Diego. He was born in Lebam, Wash., on 5 Mar 1913, and was a graduate of Benjamin Franklin University in Washington, D.C. On 6 Jun 1931 he enlisted in the Navy. CAPT Burr served in several ships including the USS *Relief* (Apr 1935-Jan 1936), the USS *West Virginia* (Jan 1936-Jun 1938) and the USS *Prairie* (Aug 1940-Feb 1942), during which time he advanced from HA2 to PhM1. On 15 Apr 1945 he was commissioned as an ENS, HC, USN.

He subsequently served in the USS *Hinsdale* from Oct 1944-Nov 1945, and from 1946 to 1950 he was assigned to the Finance Division of BUMED. CAPT Burr graduated from the U.S. Navy School of Hospital Administration at Bethesda, Md., (1950-1951), and the U.S. Naval School of Justice in Newport R.I., in 1951. He was a graduate student at the Harvard University School of Business Administration from Aug 1954 to Apr 1955.

On 1 Jul 1961 CAPT Burr was promoted to CDR. He served as director of the Hospital Administration Division of BUMED from 1963 to 1967, during which period he was promoted to CAPT, on 1 Jul 1966. At the time of his death he was the medical administrative officer on the staff of the Commandant of the 11th Naval District in San Diego.

CAPT Burr held the American Defense Medal with "A," the American Campaign Medal, Asiatic-Pacific Campaign Medal with Two Stars, European-African-Middle Eastern Campaign Medal, World War II Medal, and the National Defense Service Medal.

He is survived by his wife, Kathryn; and two sons, Michael and Wayne.

RADM Arthur H. Dearing, MC, USN (Ret.) died on 8 May in Santa Clara, Calif. Born in Scarboro, Me., on 23 Apr 1893, RADM Dearing earned his B.S. degree at Dartmouth College in 1914, and his M.D. degree at Harvard Medical School in 1917. He was appointed a LTJG Assistant Surgeon in the USNR on 23 Apr 1917, and was transferred in that rank to the Medical Corps of the U.S. Navy on 5 Sep 1917.

During his early naval career, Dr. Dearing served in many ships including USS *Amerika* (name changed to USS *America* on 5 Sep 1917), USS *Antigone, Radnor, Ramapo, Argonne, Chewink, Relief,* and *California.*

In 1927 RADM Dearing served with the U.S. Marines, who were deployed to Nicaragua to assist the Government of Nicaragua in reestablishing law and order in the conduct and supervision of a national election, and in the maintenance of peace. Dr. Dearing was awarded the Medal of Merit with Silver Star and Diploma, by the Government of Nicaragua.

Following the United States' entry into World War II, RADM Dearing served with distinction as Force Medical Officer on the staff of Commander South Pacific Area and South Pacific Force. He was awarded the Legion of Merit and a Letter of Commendation with authorization to wear the Commendation Ribbon. On 15 Jul 1942 he was promoted to the rank of RADM.

RADM Dearing was CO of Nav Hosp Oakland from Jan 1944 to Jan 1947, and he was first medical director to become an admiral and assume command of a hospital. Subsequent positions held by the admiral include: District Medical Officer, THIRD Naval District, N.Y.; Assistant Chief for Personnel and Professional Operations, BUMED; and Inspector of Naval

Medical Activities, Pacific Coast. His retirement was effected on 1 Jul 1953.

Dr. Dearing was a Fellow and Governor of the American College of Surgeons, and the University Club of New York. He held the following awards and medals: Legion of Merit; Commendation Ribbon with Bronze Star; Navy Unit Commendation Ribbon; World War I Victory Medal, Transport Clasp; the Second Nicaraguan Campaign Medal; American Defense Service Medal, Fleet Clasp; American Campaign Medal; Asiatic-Pacific Campaign Medal; and the World War II Victory Medal.

He is survived by his wife, Mary; a son and daughter; and six grandchildren.

CDR William J. Deely, MC, USN died 28 Apr in a drowning accident while vacationing in Hawaii. He was a graduate of Cornell University College of Medicine. His internship and residency in pediatrics was completed at Chelsea Naval Hospital and Boston Children's Hospital, and he received his pediatric cardiology training at New York Hospital.

For the past three years Dr. Deely served as staff pediatric cardiologist at the San Diego Naval Hospital. He was also an assistant clinical professor of cardiology at the University of California School of Medicine in San Diego. CDR Deely was a Fellow of the American Academy of Pediatrics and the American College of Cardiology.

He is survived by his wife, Eileen; a son, Michael; and six daughters, Patricia, Suzanne, Christina, Elizabeth, Margaret and Kate.

Dr. Deely was a highly respected pediatric cardiologist and a warm friend of many colleagues and patients. Contributions to the Dr. Bill Deely Memorial Fund may be mailed to CDR Martin A. Woodall, MC, USN; Chief of Pediatric Cardiology, Nav Hosp San Diego, Calif. 92134.

RADM Robert A. Ross, MC, USNR (Ret.) died 15 Apr 1973. He was born in Morganton, N.C., on 18 Jul 1899. In 1922 he received his M.D. degree from the University of Pennsylvania School of Medicine, and he subsequently did postgraduate work at the Hospital of the Protestant Episcopal Church and the Kensington Hospital for Women, Philadelphia, Pa. He was a national authority on Obstetrics and Gynecology, having been certified by the American Board in 1931.

On 8 Oct 1940, Dr. Ross was appointed a LCDR in the Naval Reserve. He reported for active duty at the outbreak of World War II, and for two years was assigned to medical officer procurement in Southern medical schools. In early 1944 he was assigned to the USS *Hamlin,* a seaplane tender, which saw action in Ulithi, the Philippines, Kerowa, Ritto, and Okinawa. He was awarded the Purple Heart Medal with citation for wounds received while aiding survivors of the USS *Pinckney* on 28 Apr 1945. Upon completion of his sea duty and until his release to inactive duty in 1946, Dr. Ross was the Chief of Obstetrics at the Naval Hospital Charleston, S.C.

Following his return to civilian life, the Admiral became active in the Naval Reserve Program, and in 1958 he was promoted to Rear Admiral. His name was placed on the Retired List in Jul 1961. Prior to his death, Dr. Ross was Professor of Obstetrics and Gynecology at the University of North Carolina School of Medicine, and Chief of Service at the University of North Carolina Memorial Hospital. Dr. Ross was a member of the American Association of Obstetrics and Gynecology, American Gynecological Society, and the Association for the Study of Internal Secretions. He was a Fellow and past President of the American College of Obstetricians and Gynecologists.

He is survived by his three children.

LCDR Charles Schaffer, MSC, USN (Ret.) died 9 Jun at the age of 95 years. He was born on 5 Jan 1878 in Brooklyn, N.Y. In Mar 1897 he enlisted in the Navy and served in USS *Terror* during the Spanish-American War in Cuban waters with Admiral Sampson's Fleet, at the bombardment of San Juan, Puerto Rico in May 1898. The Commander had subsequent service on the USS *Amphitrite, Kentucky, Alabama, Indiana, Ohio,* and *West Virginia.* During the landing expedition at Vera Cruz, Mexico in 1914, LCDR Schaffer served in USS *Culgoa.*

In World War I he was stationed at the Medical Supply Depot, Brooklyn, and later at the Naval Medical School which was then in Washington, D.C., where he was in charge of the General Chemical Laboratory. From 1931-1932 he served at the Submarine Base in Coco Solo, Canal Zone. He received the permanent rank of LCDR on 1 Feb 1942, and his name was placed on the Retired List on the same date.

LCDR Schaffer held the following medals: Sampson Medal (Commemorating Naval Engagements in West Indies), Spanish Campaign Medal, Mexican Service Medal, Victory Medal, and Good Conduct Medal. LCDR Schaffer is survived by a son.

INDEX

VOLUME 61, NUMBERS 1—6

JANUARY—JUNE 1973

NOTE: Figures indicate the number of issue and page in Volume 61 of U.S. NAVY MEDICINE. For example: ABSTRACTS, CIP (Clinical Investigation Program) and RDT&E (Research, Development, Testing and Evaluation), review of 6:1-72 indicates that this item may be found in Vol. 61, No. 6, Pages 1-72.

(Continued from p. 40)

of one's shipmates and fellow officers; expansion in the range of one's interests, which have been dormant and constrained through nine years of college and medical training; and, not least of all, the opportunity to visit and possibly reside in exciting, foreign lands.

The challenge is great, the opportunity available, and the rewards countless. *Consider* other possibilities — then *decide upon* destroyers.

REFERENCES

1. Fredholm C, Captain, Royal Swedish Navy: The North Atlantic: the Norwegian Sea, a Scandinavian security problem. *Naval War College Review,* Jun 1972, p 59.
2. The United States Naval War College. *The United States Navy,* 13th ed, p 63.
3. Ibid., p 66.

ERRATA

In *U.S. Navy Medicine* the following typographical errors are cited.

1) Vol 61, Apr 1973, "Letters to the Editor," page 42, line 11: the vital statistics of the U.S. which are referenced relate to the year 1971 (vice 1973), although these data were published in *The 1973 World Almanac.*

2) Vol 61, May 1973, "Navy Nurse Corps Directors," page 8, line 4; Mrs. Higbee was honorably discharged on 30 Nov 1922 (vice 1930).

Those retaining the publication are requested to indicate these changes.

DENTAL TECHNICIANS' BIRTHDAY

A brief ceremony honoring the 25th Anniversary of the Dental Technician Rating on 2 Apr 1973 was conducted at the Naval Dental Clinic, Naval Base, Newport, R.I.

Participating in the cake-cutting tradition were: CAPT C.F. Moul, USN, Chief of Staff, Commander, Naval Base Newport, R.I.; CAPT J.R. Evans, DC, USN, Commanding Officer of Naval Dental Clinic, Naval Base, Newport; DN W.J. Forsythe, USN; and DN P.J. Lawry, USN.

CAKE-CUTTING CEREMONY.—Participating in the festivities at the Naval Dental Clinic, Newport Naval Base were (from left to right): DN Forsythe, CAPT Moul, DN Lawry, and CAPT Evans.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1973 515-903/12

UNITED STATES NAVY MEDICINE

CORRESPONDENCE AND CONTRIBUTIONS from the field are welcomed and will be published as space permits, subject to editing and possible abridgment. All material should be submitted to the Editor, *U.S. NAVY MEDICINE,* Code 18, Bureau of Medicine and Surgery, Washington, D.C. 20372.

NOTICES should be received not later than the third day of the month preceding the desired month of publication.

PROFESSIONAL PAPERS AND ARTICLES should be typewritten on one side of the paper, double spaced, with liberal margins. Original and one carbon copy are required. Generic names of drugs are preferred. If the author's present affiliation differs from that under which the reported work was done, both should be given. Unless otherwise indicated, it will be assumed that the article presented has not been previously printed or delivered elsewhere. Papers which have been delivered or printed elsewhere, covered by copyright, cannot be reprinted in *NAVY MEDICINE* without the written permission of the author(s) and copyright holder. It is the responsibility of the author(s) to inform *U.S. NAVY MEDICINE* when the material submitted has been previously used or copyrighted. In selecting manuscripts for publication in *NAVY MEDICINE,* preference is given to original articles.

ILLUSTRATIONS are acceptable when they substantially contribute to the understanding of the basic material. Only distinct, glossy, black and white **PHOTOGRAPHS** which are functional can be printed. Prints should not be mounted, stapled, clipped or otherwise deformed and can be marked lightly on the back with the figure number. Legends should be typed consecutively on a separate paper with the indicated figures; credits for the photography may also be included. Identities of patients should be masked. **DRAWINGS, TABLES AND GRAPHS** should be minimal in number and properly labeled. They should be neatly done in heavy black ink on white paper, one to a page.

SUGGESTIONS are invited concerning *U.S. NAVY MEDICINE,* its content and form.

U.S. NAVAL PUBLICATIONS and FORMS CENTER
ATTN: CODE 306
5801 Tabor Avenue
Philadelphia, Pa. 19120
Official Business

POSTAGE AND FEES PAID
DEPARTMENT OF THE NAVY
DoD-316

U.S. MAIL

U.S. NAVY MEDICINE A WINNER.—The Navy's Chief of Information presented a Merit Award to *U.S. NAV MED* which was judged "the best magazine" of those considered for the fourth quarter of 1972.

In the above photo, James Woldahl, Managing Editor (left) presents the coveted Merit Award certificate to the Assistant Editor, Mrs. Virginia Novinski (right), as Paula Mokulis, Editorial Assistant (center) shares in the sense of achievement.

In the photo to the right, the *U.S. NAV MED* staff regards the covers of the prize-winning, Oct and Nov issues.